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ABSTRACT

A study examined the dynamics of cooperation between public school adult education programs and business and industry. On-site interviews of nine public school adult education (PSAE) directors and ten representatives from the training and development sector of business and industry were conducted, and a survey and two followup surveys were completed by 82 PSAE directors and 85 personnel managers of New Jersey firms. Data concerning the following seven areas were collected and analyzed: (1) the extent of cooperation between PSAE programs and business and industry, (2) factors accounting for the success or lack of success of this cooperation, (3) advantages and disadvantages of cooperation, (4) factors enhancing or impeding cooperation, (5) strategies to establish cooperation and their effectiveness, (6) differences between business and industries that cooperate with PSAE and those that do not, and (7) the most promising areas for future collaboration between PSAE and business and industry. Conclusions concerning these areas were drawn and suggestions were made concerning ways PSAE programs can facilitate cooperation with business and industry. (Volume I of the final report of the Facilitating Cooperation with Business and Industry Project is available separately through ERIC--see note.) (MN)

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Center for Adult Development
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COOPERATION BETWEEN EDUCATIONAL INSTITUTIONS AND BUSINESS AND INDUSTRY IN ADULT EDUCATION AND TRAINING

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PART I

INTRODUCTION: PURPOSES AND PROCEDURES OF STUDY

If adult education is considered purposeful, sustained learning activity in which adults engage, it becomes quite clear that training conducted by business and industry is a major component of the adult education enterprise. In fact, the New Jersey State Advisory Council on Vocational Education has estimated that in 1977 alone New Jersey business and industry (and unions) spent approximately five billion dollars on work-related adult education.[1] For the nation as a whole, the figure is probably in the area of $40 billion.[2] The magnitude of such expenditures suggests not only that business and industry greatly value adult education, but that considerable potential may exist for cooperation between public school adult education programs (and other educational providers) and business and industry.

Yet the evidence indicates that this potential for cooperation has not been fully realized. Fifty-three percent of the public school adult education programs studied in conjunction with the present research reported that they received no student referrals from business and industry in 1978. Sixty-eight percent cosponsored no classes with business and industry, and only fifteen percent of the programs studied cosponsored classes in the adult basic education/English as a second language arena.

Cooperation between public sector education institutions and business and industry is important for several reasons. Of increasing significance is the fact that cooperation between public sector programs and business and industry is mandated by public policy. For example, CETA legislation and the Adult Education Act both strongly urge cooperation between public and private sector in the expectation that cooperation will reduce duplication of services and promote the employability of adult clients. Of equal or even greater importance, as Beder[3] and

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[1] New Jersey State Advisory Council on Vocational Education. Annual Report, 1977. Trenton, NJ: The Council, 1978, p. 12.

[2] Harold Goldstein, Training and Education by Industry. Washington, DC: National Institute for Work and Learning, 1980.

[3] Harold W. Beder, "An Environmental Interaction Model for Agency Development in Adult Education." Adult Education, 28 (Spring, 1978): 76-190.

and Beder and Smith[1] note, collaboration with business and industry can provide new sources of operating resources for public school programs. Although the acquisition of resources is always important for programmatic growth, in our current era of public sector resource scarcity acquisition of operating resources from the private sector is all the more important.

If cooperation between public school adult education programs and business and industry is important—at least for the public sector—and if such cooperation is not widespread, a central issue becomes "why"? It is precisely this question that the present study sought to answer.

Purpose of the Study

In examining the dynamics of cooperation between public school adult education programs and business and industry, we made the following basic assumptions. First, it is crucial to understand what factors facilitate and impede cooperation, for if those factors which facilitate cooperation can be nurtured and those which impede it reduced, a more productive strategy for increasing cooperation can be developed and implemented. On the other hand, if facilitating factors cannot be increased and impediments removed, it becomes senseless to waste time and effort on attempts to increase cooperation. Similarly, it is vital to gain new insights into the costs and benefits of cooperation, for if benefits are substantial and costs minimal, greatly increased efforts at engendering cooperation are warranted. Conversely, if costs outweigh benefits, a policy of fostering cooperative relationship is counterproductive.

In accordance with the primary purpose of the study, the following research questions were posed:

1. What is the extent of cooperation between public school adult education programs and business and industry?
2. What factors account for the relative success or lack of success in public school adult education/business and industry cooperation?
3. What do public school adult educators and representatives from business and industry consider to be the advantages and disadvantages of cooperation?

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[1] Harold W. Beder and Franceska Smith, Developing an Adult Education Program Through Community Linkages. Washington, DC: Adult Education Association of the U.S.A., 1977.

4. What factors enhance and impede cooperation between public school adult education programs and business and industry?

5. What strategies do public school adult education programs and business and industry use to establish cooperative relationships how effective are these strategies?

6. What distinguishes businesses and industries that do cooperate with public school adult education programs from businesses and industries that do not?

7. What are the most promising areas for future collaboration between public school adult education programs and business and industry?

Procedures

The research incorporated five distinct steps designed to gather the information necessary to fulfill the project's goals and objectives. The sequence followed for both the Public School Adult Education (PSAE) and Business and Industry (B/I) Surveys included the following:

1. Development of an interview schedule.

2. Conducting on-site interviews.

3. Selecting a survey sample.

4. Developing a survey questionnaire.

5. Gathering and analyzing questionnaire responses.

Development of the Interview Schedules. Based upon a review of the existing literature on PSAE environmental interaction and cooperative training and development activities of the private sector, semi-focused interview schedules for PSAE (Appendix I) and B/I (Appendix II) were developed. Both schedules were tested in "sensitizing" interviews with volunteer representatives from PSAE and B/I. To increase the validity and reliability of the data collected by interview, an Interview Protocol was developed (Appendix III).

Conducting On-Site Interviews. An interview sample of nine PSAE Directors and ten representatives from the training and development sector of business and industry were selected. Both interview samples were formulated to ensure that the range of size and diversity characterizing both the PSAE agencies and the businesses were included. Appendices IV and V list the PSAE agencies and businesses where interviews were conducted. Appendix VI describes the sample method employed for the PSAE interviews.

Selecting the Survey Samples. The PSAE survey sample consisted of all public school adult education agencies in New Jersey. Adult programs in community colleges, state colleges, vocational schools and correctional and health institutions were excluded from the sample. The total number of PSAE programs thus included for the survey phase of inquiry was 188.

Selecting an appropriate sample from business and industry proved more difficult. There are 135,000 employing units reporting to the New Jersey State Department of Labor and Industry, which in turn categorizes them into nine size designations and nine functional classifications. Consequently, it was necessary to develop a workable strategy whereby a representative sample could be obtained. This was accomplished as follows. First, an initial random sample of 1000 units of private business and industry was obtained from the Division of Planning and Research of the State Department of Labor and Industry. Each unit was reclassified by size and Standard Industrial Code (SIC) number according to the following categorization schemes.

Table I-1

Classification Scheme for
Business and Industry Sample

Size (Number of Employees)	Size Category
100-249	I
250-499	II
500 or more	III

Industrial Classification	SIC Code(s)	SIC Category
Manufacturing	(2000-3000)	1
Transportation, communications and utilities	(4000)	2
Wholesale/retail trade	(5000)	3
Finance, insurance and real estate	(6000)	4
Services	(7000-8000)	5

Because previous research[1] and the preliminary interviews with the B/I sector indicated that company size (number of employees) was more important than industrial classification in determining the magnitude and nature of training and development activities and the likelihood of cooperative linkage development with the public education sector, a stratified random sample of 100 B/I units in each of the above size categories was drawn from the initial random sample of 1000, for a total sample size of 300.

Table I-2

Business and Industry Sample by Size Category

Size Category	Size (Number of Employees)	Units in Sample
I	100-249	100
II	250-499	100
III	500 or more	100
	Total	300

Having stratified the B/I sample by the designated size categories, the following distribution of units by industrial classification was obtained.

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[1] Seymour Lusterman, Education in Industry. New York: The Conference Board, 1977.

Table I-3

Business and Industry Sample
Distribution by Industrial Classification

Category	Industrial Classification	Number of Units	Percent
1	Manufacturing	194	64.67
2	Transportation, communications, and utilities	8	2.67
3	Wholesale/retail trade	46	15.33
4	Finance, insurance and real estate	19	6.33
5	Services	33	11.00
	Totals	300	100.00

It must be understood that the B/I sample selected is not representative, by size or major industrial grouping, of state business and industry as a whole. It is heavily skewed towards manufacturing firms with comparatively large numbers of employees. This approach to the survey sampling was justified based upon the following observations:

1. Although, according to Department of Labor and Industry statistics, only 3% of employing units have 100 or more employees, these units employ approximately half (49%) of the identified work force.[1]
2. Interviews with B/I representatives indicated that manufacturing firms (which alone employ 34% of the workforce) were the most active proponents of training and development activities (as indicated by estimated training expenditures).

Developing the Survey Questionnaires. Based upon the data collected during the interviews of PSAE directors and the representatives from business and industry, separate survey questionnaires were developed for each sector (The PSAE questionnaire appears in Appendix VIII; the B/I questionnaire in Appendix X). The prototype questionnaires were field tested and revised based upon the responses and commentary of twenty volunteer respondents, ten from the public school adult education sector and ten from business and industry.

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[1] New Jersey Department of Labor, "Statewide Distribution of Covered Jobs and Liable Employer Units by Size Group and Major Industrial Group." Trenton, NJ, March 1977.

The revised PSAE questionnaire was designed to elicit the following information:

1. Characteristics of the director;
2. Operating characteristics of the program;
3. Program priorities;
4. Barriers to involvement with business and industry;
5. Nature and magnitude of cooperative relationships with the private sector;
6. Strategies for initiating cooperative relationships;
7. Relative success of cooperative efforts;
8. Reasons for success/failure of cooperative efforts;
9. Potential benefits/costs of cooperation; with the private sector.

The revised B/I questionnaire was designed to elicit the following information:

1. Training and development goals of the company or firm;
2. Nature and magnitude of cooperation with educational institutions and organizations;
3. Identification of major responsibilities for planning/implementation of training and development activities;
4. Factors responsible for successful joint educational programming;
5. Potential benefits derived from cooperative relationships with public educational institutions;
6. Potential costs involved in cooperation with public educational institutions;
7. Areas of collaborative programming;
8. Barriers to cooperative programming with public school adult education programs.

Gathering Survey Questionnaire Responses. The PSAE survey questionnaire and cover letter (Appendices VII and VIII) were mailed to the 188 Directors included in the sample. Two follow-up letters were mailed at three and six weeks, respectively. Respondent numbers and percentages are summarized below.

Table I-4

Public School Adult Education
Sample Response Data

Respondents	Number	Percent of Sample
First mailing	44	24.3
First follow-up	24	12.8
Second follow-up	14	7.4
Totals	82	44.5

Of the 82 questionnaires returned, 76 were judged usable for an effective response rate of 40.4%.

The B/I survey questionnaire and cover letter (Appendices IX and X) were mailed to the Personnel Managers of the 300 companies and firms in the size-stratified random sample generated from the Department of Labor and Industry's computer listing. A single follow-up letter was mailed three weeks after the initial survey distribution. Respondent numbers and percentages are summarized below.

Table I-5

Business and Industry Sample Response Data

Respondents	Number	Percent of Sample
First mailing	41	13.7
First follow-up	44	14.6
Totals	85	28.3

Data Analysis

All respondent data from both surveys were coded, keypunched, and verified for analysis utilizing the Statistical Package for the Social Sciences (SPSS). Frequency distributions and descriptive statistics were generated for all variables on both surveys. Sub-sets of the data were also subjected to bi-variate crosstabulation analysis, to which the chi square test was applied, and to one-way ANOVA and/or t-tests (two-tailed). In some cases, zero-order correlations were computed or Kendall's tau, a non-parametric measure of association. The criterion of statistical significance was set at .05.

Limitations of Study

The major limitation of the study relates to external validity, that is, the extent to which the findings can be generalized to the population of PSAE programs and B/I training units in New Jersey.

Despite strenuous follow-up efforts, the response rate from PSAE directors was approximately 40 percent. The length of the questionnaire (11 pages) was, in our opinion, the major reason for a lower-than-expected return rate. A comparison of basic program characteristics of the final sample with similar data collected in 1977 by the Association for Adult Education of New Jersey revealed few discrepancies.[1] For example, annual operating budget for the 1977 sample was $106,920, and for the present sample $108,376. However, the 1977 respondents reported fewer classes co-sponsored with other organizations, such as businesses and industries (an average of 2 versus 3 in the present study).

As anticipated, the response rate from the B/I sector was even lower. Vigorous follow-up efforts were precluded because the names and even the titles of the training managers (or equivalents) for the B/I sample were unobtainable. We were compelled, therefore, to route the questionnaires indirectly through the B/I personnel directors. Once the questionnaires were mailed, little could be done to encourage returns other than to send a reminder letter to the personnel office.

In short, while we have little basis to believe that the findings are systematically distorted due to non-response bias, we cannot rule out the possibility that some bias exists. If it does, it is probably a function of overrepresentation by adult education programs, and perhaps businesses and industries, that have had some history of cooperative relationships. Thus, our estimates of the extent of such cooperation may err toward the high side.

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[1] Harold W. Beder. AAENJ Research Monograph No. 1. Union, NJ: Association for Adult Education of New Jersey, 1977.

Organization of the Report

The results of the research are organized into three sections. The first analyzes cooperation from the perspective of public school adult education programs; the second focuses on business and industry perspectives regarding cooperation with public sector programs; and the concluding section presents an analytical synthesis of all findings as well as policy recommendations. In general, the findings are organized according to the previously listed research questions.

PART II

COOPERATION WITH BUSINESS AND INDUSTRY FROM THE PERSPECTIVE OF NEW JERSEY PUBLIC SCHOOL ADULT EDUCATION PROGRAMS

In analyzing public school adult education/business and industry cooperation, the first questions that arise relate to how much cooperation occurs and with whom. Let us first examine the amount or quantity of cooperation.

Extent of Cooperation

In respect to the extent of cooperation, survey results show that 62 percent of the public school adult education directors indicated they cooperated with "any element of the private sector" during the past year. Conversely 37 percent indicated that they did not cooperate. The phrase "cooperate with any element" is rather broad, however, and purposefully so. More specific information on the amount of cooperation that occurs can be gained by analyzing data on referral and cosponsorship, two of the most prevalent forms of cooperation. Data on student referrals made by business and industry to public school adult education programs are given in Table II-1.

Table II-1

Referral of Students to Public School Adult Education Programs By Business and Industry

Purpose of Referral	Average Number of Students Referred (N = 36)	Percent of Programs Indicating No Referrals (N = 76)
For basic skills (ABE, ESL)	13.4	71.0
For high school completion or equivalent	30.5	61.8
For vocational/technical training	54.3	61.8
For job-related enrichment activities	53.4	69.8
For job counseling/employability skills development	23.8	81.6
For any reason	81.1	52.6

It would appear that in terms of numbers of students referred, business and industry refers more students for vocational/technical training and general enrichment than for other forms of education. A moderate number of students are referred for job counseling/employability skills and high school equivalency preparation, but few students per program have been referred for adult basic education (ABE). The fact that public school ABE components are generally considerably smaller than general enrichment or vocational/technical components undoubtedly affects these figures. Yet the fact that 71.0 percent of the public school programs report no referrals for ABE supports a conclusion that the ABE-ESL arena has not been fertile ground for business and industry student referral. Furthermore, the percentage of public school programs receiving no referrals in each category suggests that business and industry student referral is not a major factor for the majority of New Jersey programs.

When we examine cosponsorship between public school adult education programs and business and industry, a similar pattern is revealed.

Table II-2

Incidence of Cosponsorship Between New Jersey Public School Adult Education Programs and Business and Industry
(N = 24)

Purpose	Average Number of Classes/ Activities Cosponsored	Percent of Programs Indicating No Cosponsorships	Average Number of Students Enrolled in Cosponsored Classes
For basic skills (ABE, ESL)	1.0	85.5	13.0
For high school completion or equivalent	1.3	84.2	25.6
For vocational/ technical training	3.9	77.4	62.4
For job-related enrichment activities	2.9	85.5	60.4
For job counseling/ employability skills development	1.1	96.1	12.13

As with referral, vocational/technical training and job-related enrichment activities account for the greatest amount of cosponsorship, with cosponsorship in the basic skills areas being considerably less important. It is also clear that, in general, cosponsorship with business and industry is not a major way of providing instruction to the adult public in New Jersey, since in no category do more than a fourth of the public school adult education programs engage in cosponsorsed programming with business and industry.

In conclusion, although almost two-thirds of the public school adult education programs indicated that they have cooperated with business and industry in some fashion, the majority of programs neither cosponsored classes with business and industry nor received substantial student referrals from the private sector.

Types of Cooperators

What about the programs that do cooperate substantially? With what types of business and industry do they most frequently cooperate? The following table provides an answer.

Table II-3

Public School Adult Education Directors' Self-Reported Closeness of Cooperation with Various Types of Business and Industry

(N = 47)

Type of Business or Industry	Percent Not Applicable	Percent Not Close	Percent Somewhat Close	Percent Very Close	Totals
	Closeness of Cooperation				
Large manufacturing (500 + employees)	40.4	25.5	19.1	14.9	99.9
Medium manufacturing (100-500 employees)	39.1	28.3	23.9	8.6	99.9
Small manufacturing (less than 100 employees)	27.7	21.3	[illegible]1.9	19.1	100.
Retail stores	35.6	17.8	31.1	15.5	100.
Service (food, hotel, recreational)	24.4	13.3	35.5	26.7	99.9
Financial institutions	17.0	12.8	46.8	23.4	100.
Proprietary schools (Smokeenders, Lean Line, TM, etc.)	17.0	6.4	40.4	36.1	99.9

It appears that public school adult education programs cooperate most closely with proprietary schools (36.1 percent cooperate very closely), and least closely with medium and large sized manufacturing concerns. Although cooperation with the remaining categories of business and industry varies somewhat, differences in closeness of cooperation are not striking among this remaining group.

We suspect that the relative closeness of the relationship between public school adult education programs and proprietary "schools," such as Lean Line, is related to financing structure. Except for basic literacy, high school completion, and some vocational programming, most public school adult education course offerings are financed through learner fees. Such is also the case with proprietary schools. This presents a common basis for cooperation. Proprietary schools generally design and instruct cooperatively offered courses, while the adult school promotes the course and provides access to facilities and learners. The income generated is then split for a mutual benefit to both parties. In short, cooperation with proprietary schools is financially lucrative and relatively easy to consummate. Moreover, since adult schools provide a ready outlet for the services of proprietary schools, these organizations aggressively seek cooperative relationships with public school adult education programs.

A relative lack of cooperation with medium sized industry is more difficult to explain. We would speculate that smaller manufacturing concerns are easier to initiate cooperative relations with, as they tend to be more oriented towards their communities, have fewer levels of bureaucracy to confront in establishing communication, and seldom have the resources to conduct their own educational activities in-house. Even more important in all likelihood is the fact that there are simply more smaller manufacturing concerns to cooperate with. In contrast, there may be few or no larger manufacturing companies in many communities. This may be the major reason why approximately 40 percent of the directors assert that cooperation with medium sized and large manufacturing concerns is "not applicable."

Factors Accounting for Success in Cooperation

Clearly, if the incidence of cooperation between public school adult education programs and business and industry is to be increased, an understanding of what accounts for success in cooperation is necessary. To answer this question, the adult school respondents were divided into three groups. The first group included all who indicated they had formally cooperated with business and industry during the past school year and that their cooperative relationships were successful. This group of avowedly successful cooperators included 23 programs, 30.3 percent of the total sample. The second group consisted of those who indicated that although they had formally cooperated with business and industry during the past year, their cooperative relationships were unsuccessful. Twenty-one programs fell into this unsuccessful cooperator category, 27.6 percent of the total sample. The final group was comprised of all those programs which reported they had not formally cooperated with business and industry. Twenty-eight (36.8 percent) programs were included in this group. Once constituted, these three groups were compared on a number of relevant variables.

Previous research has identified several variables that are often influential in predicting administrative processes in public school adult education programs.[1] It seemed reasonable to assume that at least some of these variables might affect success at cooperation with business and industry. Among these variables are: number of years the director has directed adult education in his or her district; the number of hours per week the director devotes to adult education; hours per week spent contacting members of the community to promote or expand agency service; total program enrollment; operating budget; percent of students enrolled in general enrichment versus ABE/ESL/HSC classes; location of courses; extent of urbanization in the district; program priorities; educational status of the district; and degree of industrialization of the district. When these variables were compared for the three groups, the following results were obtained.

Table II-4

Comparison of Successful, Unsuccessful, and Non-Cooperators With Business and Industry According to Selected Organizational, Director Background and Environmental Variables

	Group		
Characteristic	Successful Cooperators (N = 24)	Unsuccessful Cooperators (N = 21)	Non-Cooperators (N = 28)
Number of years directed adult education in district	6.7 yrs.	5.7 yrs.	6.5 yrs.
Number of hours per week director devotes strictly to adult education	31.8 hrs.	31.9 hrs.	27.9 hrs.
Average number of hours per week director spends contacting community members to promote or expand agency service	6.5 hrs.	5.2 hrs.	3.0 hrs.
Total enrollment, current school year	4,424	3,113	2,910
Total operating budget	$151,412	$103,061	$ 68,255

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[1] Harold W. Beder, "The Relationship of Community and Sponsor System Support to Selected Aspects of Adult Education Agency Functioning." Adult Education, 29 (Winter, 1979): 96-107.
Gordon G. Darkenwald, "Innovation in Adult Education: An Organizational Analysis." Adult Education, 27 (Spring, 1977): 156-172.

Table II-4, Continued

Characteristic	Group Successful Cooperators (N = 26)	Unsuccessful Cooperators (N = 21)	Non-Cooperators (N = 28)
Percent of students enrolled in general enrichment courses	60.2 %	54.9 %	68.5 %
Percent of students enrolled in ABE/ESL/HSC	10.7 %*	26.7 %*	14.1 %
Percent of students enrolled in vocational courses	23.0 %	19.8 %	16.8 %
Percent of students residing in rural areas	15.4 %	17.0 %	13.9 %
Percent of students residing in suburban areas	68.4 %	56.0 %	61.1 %
Percent of students residing in urban areas	16.8 %	26.8 %	25.0 %
** Rank order priority—provide avocational/recreational opportunities (range 1-5)	2.2	2.6 *	1.8 *
Rank order priority—provide disadvantaged learners with basic skills	2.6 *	2.0 *	1.6 *
Rank order priority—provide adults with job entry vocational skills	2.4	2.3	2.4
Rank order priority—provide opportunities for career growth of employed adults	2.7	3.1	3.2
Percent of districts' adult population having:			
completed 4 years or more of college	28.6 %	20.1 %	20.6 %
some post-secondary education (> 4 years)	21.9 %	14.8 %	19.0 %
only a high school diploma	36.1 %	31.5 %	37.1 %
lack of a high school diploma or equivalent	24.7 %	33.9 %	28.3 %

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* Difference between groups significant at .05 level (two-tailed t-test)

** Rank order ranges from 1 (high) to 5 (low)

There are several things which are striking about these results. The first is that organizational variables (program size, budget), environmental variables (urban-rural orientation, educational level of district), and director background variables (number of years in district, percent of effort devoted to adult education) seem to have very little relationship to success at cooperation with business and industry. Neither do these variables appear to have much relationship to whether or not a program does cooperate. Also of note is the finding that of all the above variables, only "program orientation" seems to make a difference in cooperation success. Specifically, unsuccessful cooperators have a significantly greater percentage of ABE students (26.7%) than successful cooperators (10.7%) or non-cooperators (14.1%). Similarly the differences between non-cooperators, unsuccessful cooperators, and successful cooperators with respect to the priority they place on ABE/ESL/HSC are statistically significant. Non-cooperators place the highest priority on programming for the disadvantaged (1.6), unsuccessful cooperators place the next highest priority (2.0) on this group, and successful cooperators place the lowest priority on programming for the disadvantaged (2.6).

These results lead to the conclusion that ABE/ESL/HSC has not been a particularly productive arena for cooperation with business and industry. When cooperation in this area does occur, there is a significantly greater likelihood that directors will consider it to be unsuccessful. Furthermore, directors who consider their cooperative relationship with business and industry to be successful tend to place a lower priority on ABE/ESL/HSC programming.

If organizational, environmental, and director background variables do not meaningfully affect cooperation with business and industry, what factors do affect success at cooperation? To answer the question, we first turn to an analysis of differences between programs that indicate they have been successful in cooperating with business and industry during the past year and programs that indicate that their cooperation with business and industry has been unsuccessful. We shall first focus on directors' reports of factors that have limited their involvement with business and industry.*

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* Measured by 7-point scales, 1 = insignificant factor, 7 = very significant factor.

Table II-5

Comparison of Mean Scores of Successful and Unsuccessful Cooperators Based on Ratings of Factors Which Limit Involvement With Business and Industry

Factor Limiting Involvement	Successful Cooperators (N = 23)	Unsuccessful Cooperators (N = 21)
There is little or no business/ industry in my area.	3.3	3.7
There is little offered by my program which business and industry needs.	2.8	3.7
I do not have enough time to make arrangements.	3.7	3.5
I don't know how to contact business and industry.	1.6	2.1
I don't know what needs business and industry has.	3.4	2.9
School district regulations or policies make it difficult to work with business and industry.	2.0	2.2
Competition with other adult schools, community colleges, limits opportunities for cooperation.	2.5	3.3
Experience with business and industry in the past leads me to believe that cooperation is not worth the effort.	1.8 *	2.9 *
I see no advantage to cooperating with business and industry.	1.3 *	1.9 *

* Difference between groups significant at .05 level (two-tailed t-test).

In respect to factors perceived as limiting involvement with business and industry, there are only two differences between successful cooperators and unsuccessful cooperators which are statistically significant. Based on experience with business and industry, unsuccessful cooperators are more likely to feel that cooperation was not worth the effort. Similarly, unsuccessful cooperators are more likely to see no advantage to cooperating with business and industry. Although the mean scale scores are low in both these cases, it is important to note that both limiting factors pertain to how much directors value cooperation. In fact, of the nine factors listed, only these two items pertain to the value placed on cooperation. There are at least two conclusions which can be drawn from these findings. First, it might be that unsuccessful cooperation with business and industry has soured such directors on cooperation to the extent that they have a rational basis for believing cooperation is indeed not worth the effort and that there is no advantage in cooperation. Alternatively, albeit less compellingly, it might be the case that low value initially ascribed to cooperation amounts to a self-fulfilling prophecy; directors who believe cooperation is not worth the effort and that there is little advantage to cooperation fail to expend the effort required to make cooperative relationships successful.

Although it is not possible to determine from the data which interpretation is the most accurate, it is clear that attitudes regarding the value of cooperation with business and industry are a significant factor in perceived success at cooperation.

Continuing our comparison between programs which indicate success at cooperation and programs which indicate that cooperative efforts with business and industry have been unsuccessful, we now turn to an analysis of costs and benefits.

Table II-6

Comparison of Mean Scores of Successful and Unsuccessful Cooperators Based on Ratings of Benefits and Costs Received From Cooperation With Business and Industry

Benefits	Successful Cooperators (N = 23)	Unsuccessful Cooperators (N = 20)
Increased enrollments	4.8 *	3.1 *
Increased funds	3.1	2.2
Access to needed facilities, equipment, or materials	3.6 *	1.9 *
Increased visibility for program	5.1 *	3.7 *
Access to needed instructional expertise	4.8 *	3.2 *
Increased influence of program in community	4.8 *	3.1 *
Provision of support services	2.5	2.0
Increased autonomy for program	3.0 *	1.9 *
Costs		
Loss of program flexibility	1.2	1.4
Excessive expenditure of time	2.9	2.5
Programming hassles	1.8	1.7
Excessive fiscal expenditures	2.0	1.7
Scheduling problems	2.0	1.8
Negative publicity	1.5	1.4

* Difference between groups significant at .05 level (two-tailed t-test).

As might be expected, successful cooperators with business and industry feel that they derive more benefit from the relationship than cooperators who feel that their relationships with business and industry have been unsuccessful. This is true for all benefits listed, the differences being statistically significant for six of eight. Clearly, either unsuccessful cooperators feel unsuccessful because they tried hard and failed to achieve benefits, or, alternatively, they believed at the outset that benefits would be minimal and this belief became a self-fulfilling prophecy. Whatever the case (the former explanation seems to us more cogent), it is obvious that perception of benefits recieved in cooperating with business and industry is strongly associated with perception of the success of cooperative efforts.

Interestingly, this does not seem to be the case for costs, for there are no significant differences between successful and unsuccessful cooperators in respect to their perceptions of costs incurred in cooperating with business and industry.

Barriers to Cooperation

There is a third area which presents us with several insights into success at cooperating with business and industry; that area focuses on the barriers to cooperation. In analyzing the relationship of barriers to success, we shall return to our three-part grouping: programs that cooperated with business and industry and perceived the relationship to be successful, programs that cooperated with business and industry and considered the relationship to be unsuccessful, and programs that did not cooperate during the year preceding the survey.

Table II-7

Comparison of Mean Scores of Successful, Unsuccessful and Non-Cooperators Based on Ratings of Barriers to Cooperation with Business and Industry

Barriers to Cooperation	Successful Cooperators (N = 26)	Unsuccessful Cooperators (N = 21)	Non-Cooperators (N = 28)
Constraints on my time	4.2	4.5	4.4
Competition from other programs	3.0	3.5	3.4
Poor communication with business and industry	3.2 *	4.8 *	4.2
Lack of business and industry interest	3.4 *	5.3 *	4.4
Scheduling problems	2.4	2.9	3.1
Lack of funds	2.9	3.8	4.0
Differences between goals of private sector and those of my program	2.3 [a]	4.3 [b]	2.6 [c]
Image of public school adult education held by business and industry	2.4 [a]	4.2 [b]	2.4 [c]
Programming hassles	1.8	2.4	2.6
Lack of support by school system	2.0	2.6	3.1
Insufficient program staff	3.0 *	4.3 *	3.7
Private sector interest in profit, not education	2.7 *	4.6 *	3.3
Need for caution in developing new programs	2.7	3.0	2.8

* Differences between groups significant at .05 level (two-tailed t-test).

a, b, c, Differences between ab and bc significant at .05 level (two-tailed t-test).

The barriers to cooperation listed are essentially of two types. One set of barriers pertains to factors internal to the adult education program. Among these barriers are: constraints on time, competition, scheduling problems, lack of funds, programming "hassles," lack of school system support, insufficient staff, and need for caution in developing new programs. Of all these internal barriers, only one seems to be related to success at cooperation. That one factor is insufficient program staff, a barrier that is a greater constraint for unsuccessful cooperators than it is for either successful cooperators or non-cooperators. The difference between successful cooperators and unsuccessful cooperators in respect to insufficient program staff is statistically significant.

The second type of barrier pertains to the relationship between public school programs and business and industry. Among this set of barriers are: poor communication with business and industry; lack of business and industry interest; differences between the goals of the private sector and those of the public school program; image of the public school program held by business and industry; and the perception that private sector institutions are interested in profit rather than education. When differences between successful cooperators, unsuccessful cooperators, and non-cooperators are examined in relation to the barriers that pertain to relationships between adult education programs and business and industry, we find there are statistically significant differences in every case. This stands in marked contrast to the relative lack of significant differences pertaining to internal barriers.

To be specific, successful cooperators perceive poor communication with business and industry, lack of business and industry interest, and private sector focus on profit rather than education to be less important barriers than do unsuccessful cooperators. Unsuccessful cooperators perceive differences between the goals of the private sector and those of their programs, and the image of adult education held by business and industry to be greater barriers than either successful cooperators or non-cooperators.

It would seem that many of the barriers that typically constrain adult education programs, such as time, money, scheduling, support and competition are not related to public school adult education directors' perceptions of their success in cooperation with business and industry. The barriers that do tend to make a difference in perceptions of success focus on the relationship between public school adult education programs and business and industry. These barriers relate to perceptions of poor communication, lack of interest, differences in goals, differences in motives, and business and industry image of public school adult education.

Correlates of Objective Measures of Cooperation

Thus far in our analysis of success at cooperation with business and industry we have employed directors' perceptions of success and incidence of cooperation as the primary independent variables. Although this has the advantage of enabling us to analyze success at cooperation in a holistic fashion, perceptual data can be misleading because of their subjective nature. Desiring a more objective measure of success at cooperation with business and industry, we looked to the incidence of referral and cosponsorship relationships with business and industry.

Although there are many other forms of inter-organizational cooperation in public school adult education, referral and cosponsorship are among the most prevalent. Accordingly, to develop an objective indicator of success at cooperation with business and industry, three indices were developed that focused on referral and cosponsorship. The first, Referral, is the sum total of all students reportedly referred to the public school adult education program by business and industry divided by total program enrollment in order to control for program size. The second, Cosponsored Classes, is the sum total of all classes cosponsored by business and industry. This index is not controlled by size. The third measure, Cosponsored Students, is the total number of students in classes cosponsored with business and industry divided by program enrollment, again to control for size. It is assumed that the more referrals from business and industry and the more classes cosponsored by business and industry, the more successful the program is in cooperation.

When the objective indicators of success at cooperating were compared on the basis of the organizational, director background, and environmental variables dealt with earlier, the following results were obtained.

Table II-8

The Relationship Between Organizational, Director Background, and Environmental Variables and Indices of Student Referral and Cosponsorship
(Zero Order Correlation)
(N = 47)

		Indices	
Variable	Referral	Cosponsored Classes	Cosponsored Students
Years director has directed adult education	.22 *	.24 *	.19 *
Hours per week devoted to adult education	.31 *	.16	.18
Hours spent per week meeting with the community	.32 *	.18	.11
Budget	.14	.04	.13

Table II-8, Continued

Variable	Indices		
	Referral	Cosponsored Classes	Cosponsored Student
Percent enrollment in enrichment courses	-.20 *	-.17	-.06
Percent enrollment in ABE/HSC/ESL	-.03	-.01	-.06
Percent of students enrolled in vocational/technical courses	.34 *	.39 *	.27 *
Percent of students residing in rural areas	-.08	.06	-.04
Percent of students residing in suburban areas	.06	-.05	.07
Percent of students residing in urban areas	-.01	.02	-.05
High priority placed on avocational/recreational	-.36 *	-.20 *	-.02
High priority placed on ABE/HSC	-.08	-.01	-.22 *
High priority placed on job entry-vocational education	-.05	.12	-.08
High priority placed on providing opportunities for career growth of employed adults	.30 *	.16	.14
Percent of adult population in district with 4 or more years college	.13	.03	.01
Percent of adult population in district with some post-secondary education	.03	.00	.02
Percent of adult population in district with only high school diploma	-.16	.14	.07
Percent of adult population in district who lack a high school diploma	-.07	.06	.09
Degree of industrialization	.31 *	.15	.11

*Significant at .05 level.

Our first conclusion is that the objective measures tend to support the earlier findings based on directors' perceptions of success at cooperation. Organizational variables, director background variables, and environmental variables seem to have little impact on success at cooperation with business and industry. Although there are several significant correlations between these variables and referral and cosponsorship, the strength of the correlations tends to be weak. No correlation exceeds .36.

Examining the significant but weak correlations in more detail, we find that there is some relationship between the number of years a director has directed adult education and measures of referral and cosponsorship. It could be that experience does play a role in fostering cooperative relationships, but if so it is not a particularly large role. Effort, measured by the number of hours per week a director devotes to adult education and the hours spent per week meeting with the community, seems to affect referral to a small extent, but not cosponsorship.

Clearly, programs with larger percentages of vocationally oriented courses do better at both cosponsorship and referral with business and industry, while programs which have higher percentages of enrichment and avocational courses do less well in securing referrals from business and industry. These relationships seem quite logical, as one would expect vocationally oriented programs to articulate more closely with business and industry needs than recreationally oriented programs. These relationships are borne out when the reported programming priorities of public school adult education programs are examined. High priority placed on avocational/recreational programming is negatively related to the incidence of referral and cosponsored classes, but not to numbers of cosponsored students as controlled by program size. This finding is what one would expect. In the vocational arena, high priority placed on providing job entry vocational skills has no relationship to referral or cosponsorship, but high priority placed on providing opportunities for career growth of employed adults does show a positive relationship with referral, but not cosponsorship. Again, this pattern of relations is not surprising.

In the area of ABE/ESL/HSC, we note that the percentage of enrollment in such courses has no relationship to referral or cosponsorship, while a high priority placed on these subjects is negatively associated with the number of cosponsored students, but not referral or cosponsored classes.

A final relationship of note is that between industrialization and success of cooperation with business and industry. The more industrialized the area served by the public school adult education program, the greater the number of referrals from business and industry to the program. Curiously, however, industrialization has no relationship to cosponsorship with business and industry.

Interim Summary

Our analysis of success at cooperation between public school adult education programs and business and industry leads to three sets of conclusions. The first is that organizational, director background, and environmental variables that have proved to be important predictors of program behavior in the past, do not affect success of cooperation with business and industry to an appreciable degree. When the director's perception of his/her success at cooperation is examined, success bears no significant relationship to the number of years the director has directed adult education, the number of hours per week the director devotes strictly to adult education, the average number of hours per week the director spends contacting community members to promote or expand agency service, total enrollment, total program budget, urban-ruralness, or education attainment level of the district.

If the incidence of referral and cosponsorship relations with business and industry is examined, week associations with organizational, director backgound, and environmental variables emerge. Incidence of referral from business and industry is significantly but modestly related to the number of years the director has directed adult education, the number of hours per week he or she devotes to adult education, the number of hours per week the director spends contacting community members to promote or expand agency service, and the degree of industrialization within the service area. There is no relationship with program budget, degree of urbanization of the service area, or educational attainment level of the district. Incidence of cosponsorship is weakly related to the number of years the director has directed adult education, and shows no relationship to the other organizational, director background and environmental variables described above.

Our second set of findings relates to program orientation. If we look at the director's perception of his program's success at cooperating with business and industry, we find that an orientation towards ABE/ESL/HSC is related to significant differences between successful and unsuccessful cooperators with business and industry. Programs with high percentages of students enrolled in ABE/ESL/HSC are more likely to report unsuccessful cooperation than successful cooperation. Similarly, programs that place high priority on providing disadvantaged learners with basic skills are more apt to be non-cooperators or unsuccessful cooperators than successful cooperators.

Analysis based on the actual incidence of referral and cosponsorship presents a somewhat different picture. Referral is negatively related to the percent of enrollments in enrichment courses and to a high priority placed on avocational/recreational programming. Clearly, business and industry tend not to refer learners to recreationally oriented education. On the other hand, an orientation toward vocational programs is positively related to actual rates of referral and cosponsorship. Programs that have higher percentages of vocational/technical enrollments tend to have more referrals and cosponsorships with business and industry. Similarly, programs that place high priority on providing opportunities for career growth of employed adults have a greater incidence of referral with business and industry. The obvious and not unexpected conclusion is that programs that are vocationally oriented articulate with business and industry to a greater degree.

Our last set of conclusions addresses the relationship between director's attitudes and success at cooperation with business and industry. Comparison of programs that report success at cooperation with programs that report unsuccessful cooperation with business and industry suggests that successful cooperators value cooperation more highly than do unsuccessful cooperators. The most plausible explanation is that unsuccessful relationships have soured the latter group of directors on the potential value of collaborating with business and industry. As one would expect, successful cooperators report greater benefits from cooperation with business and industry than do unsuccessful cooperators, though no differences distinguish the two groups in respect to reported costs of cooperation.

Finally, it can be said that there are major differences between how successful and unsuccessful cooperators perceive barriers to cooperation. Although there are few differences between the two groups in respect to perceived severity of "internal barriers" such as time and budget constraints, there are significant differences between the two groups when it comes to barriers associated with the relationship between public school programs and business and industry. Unsuccessful cooperators are considerably more likely to see such factors as poor communication with business and industry, lack of business and industry interest, and a private sector interest in profit rather than education as factors limiting cooperation.

The Advantages and Disadvantages of Cooperation

Obviously an analysis of the advantages (benefits) and disadvantages (costs) of cooperation with business and industry is important in understanding the role such cooperation now plays and can potentially play in public school adult education programming. Let us begin with an analysis of benefits.

Table II-9

Extent of Benefits Received by Public School Adult Education Programs from Cooperation with Business and Industry, in Percent

(N = 46)

	Extent to Which Benefit Was Received			
Benefit	Little or No Extent	Moderate Extent	Great Extent	Totals*
Increased enrollments	21.8	50.0	28.2	100.0
Increased funds	52.2	36.9	10.8	99.9
Access to needed facilities, equipment or materials	56.5	30.4	13.0	99.9
Increased visibility for program	11.1	57.8	31.2	100.1
Access to needed instructional expertise	30.4	41.4	28.2	100.0
Increased influence of our program in community	21.7	52.2	26.0	99.9
Provision of support services (e.g. counseling)	61.4	31.9	6.8	100.1
Increased autonomy for program	56.8	38.6	4.6	100.0

* May not add to 100% due to rounding.

It is undeniable that those programs which cooperated with business and industry benefited from the relationship. A majority of the cooperating programs report they benefited to at least a moderate extent from increased enrollments, increased program visibility, increased access to needed instructional expertise, and increased influence in the community. A substantial number of programs also report they received benefit from increased funds and from access to needed facilities, equipment or materials. Provision of supportive services and increased program autonomy are the areas where benefits were least extensive.

Benefits, however, are best understood in relation to costs. When programs that had cooperated with business and industry were asked to report the extent to which they incurred certain costs, the following results were obtained.

Table II-10

Extent of Costs Incurred by Public School Adult Education Programs In Cooperating with Business and Industry, in Percent

(N = 45)

	Extent to Which Cost Was Incurred			
Cost	Little or No Extent	Moderate Extent	Great Extent	Totals*
Loss of program flexibility	91.1	8.9	0.0	100.0
Excessive expenditure of time	51.1	40.0	8.9	100.0
Programming hassles	79.5	16.0	4.5	100.0
Excessive fiscal expenditure	77.8	22.1	0.0	99.9
Scheduling problems	68.9	26.6	4.4	99.9
Negative publicity	91.1	8.9	0.0	100.0

* May not add to 100% due to rounding.

While the benefits to cooperation with business and industry are substantial, the costs are clearly minimal. Although nearly half the directors note at least some time expenditure cost, in no cost category did as many as ten percent of the directors indicate that the cost was incurred to a great extent. The most extensively incurred costs seem to be time expenditures, scheduling problems, fiscal expenditures, and programming "hassles." These findings lead to the conclusion that the advantages of cooperating with business and industry substantially exceeds the costs.

Factors That Facilitate and Impede Cooperation

An understanding of the factors which facilitate and impede cooperation between public school adult education programs and business and industry is important in developing cost effective strategies for enhancing cooperation. To gain such an understanding, a three part strategy was used. First, all respondents were asked to indicate to what extent thirteen selected barriers had limited cooperation with the private sector. Second, directors who indicated that their cooperative relationship with business and industry had been unsuccessful were asked to indicate their reasons for lack of success. Finally, directors who indicated that their cooperative relationship with business and industry had been successful were asked to what extent they attributed success to various factors. When all respondents were asked to what extent thirteen selected barriers had limited cooperation with business and industy, the following results were obtained.

Table II-11

Directors' Perceptions of Extent to Which Selected Barriers Limit Cooperation With Business and Industry, in Percent (N = 75)

	Extent to Which Barrier Limits Cooperation			
Barrier	Little or No Extent	Moderate Extent	Great Extent	Totals*
Constraints on time	24.0	36.0	40.0	100.0
Competition from other programs	40.0	42.7	17.3	100.0
Poor communication with business and industry	22.7	52.0	25.4	100.1
Lack of business and industry interest	16.0	57.4	26.6	100.0
Scheduling problems	56.0	30.6	13.3	99.9
Lack of funds	49.3	18.6	32.0	99.9
Differences between goals of private sector and those of my program	50.0	41.9	8.1	100.0
Image of public school adult education held by business and industry	54.9	35.2	9.8	99.9
Programming hassles	67.1	26.0	6.8	99.9
Lack of support by school system	66.7	21.3	12.0	100.0
Insufficient program staff	35.1	46.0	18.9	100.0
Private sector interested in profit, not education	43.1	34.8	22.2	100.1
Need for caution in developing new programs	53.3	35.9	10.7	99.9

* May not add to 100% due to rounding.

The five barriers that seem most important in impeding cooperation are constraints on time, lack of funds, poor communication with business and industry, lack of business and industry interest, and the assessment that private industry is interested in profit, not education. Other barriers are less important in general but can be significant in individual cases.

There seem to be two dimensions to the most important barriers. The first, illustrated by lack of funds and time constraints, pertains to program resources. Since time and money are scarce and valuable resources, it is no wonder that expenditures represent real barriers. The second dimension seems to be a bit more subtle. By indicating that "lack of business and industry interest" and "business and industry emphasis on profit, rather than education" are two important barriers, directors may be questioning whether the value business and industry places on cooperation is sufficiently strong to enable cooperation to occur.

Another way to examine barriers is to ascertain what factors have prevented programs that have cooperated with business and industry from cooperating successfully. Unsuccessful cooperators were asked to indicate the degree to which certain factors had contributed to lack of success. The results are shown in Table II-12.

Table II-12

Unsuccessful Cooperators' Perceptions of Factors Which Limited Their Success at Cooperation With Business and Industry, in Percent

(N = 19)

Factor	Extent to Which Factor Contributed to Lack of Success: Little or No Extent	Moderate Extent	Great Extent	Totals
Scheduling problems	61.1	27.8	11.2	100.1
Employer dissatisfaction with outcomes	84.2	15.9	0	100.1
Participant dissatisfaction with program	73.7	21.1	5.3	100.1
Financial burden on program	42.1	47.3	10.5	99.9
Lack of commitment by business and industry	26.3	42.2	31.6	100.1
Insufficient enrollments or retention	36.8	42.2	21.0	100.0
Insufficient publicity or promotion	47.4	31.5	21.1	100.0
Unclear division of responsibilities	61.1	33.3	5.6	100.0
Poor communication	38.9	38.9	22.3	100.1
Program objectives poorly defined	44.4	38.9	16.7	100.0

* May not add to 100% due to rounding.

As a group, unsuccessful cooperators feel that lack of commitment by business and industry is the most important barrier. In accordance with the concept of valuing presented earlier, these directors apparently feel that business and industry is not sufficiently committed to the kinds of education indicated by public school programs. Other important barriers are insufficient enrollments or retention, insufficient publicity or promotion, and poor communication with business and industry.

Let us now turn to facilitators. Programs that had cooperated successfully with business and industry were asked to indicate the reasons for their success.

Table II-13

Successful Cooperators' Perceptions of Factors Contributing to Success in Cooperating With Business and Industry, in Percent and by Mean Scale Score Rank

(N = 25)

Factor	Little or No Extent	Moderate Extent	Great Extent	Rank by Mean Score	Totals*
Flexibility of my agency in meeting business/ industry needs	0	48.0	52.0	3	100.0
Freedom given me by school system	8.0	32.0	60.0	2	100.0
Image/visibility of my agency	8.0	40.0	52.0	7	100.0
Good communication with business and industry	8.4	41.7	50.0	8	100.1
Clear division of program responsibilities	16.7	58.4	25.0	9	100.1
Well-defined program objectives	4.0	56.0	40.0	6	100.0
Effective promotion/ publicity	8.0	32.0	60.0	4	100.0
Strong business/industry support or interest	17.4	56.5	26.0	10	99.9
Participant satisfaction	0	36.0	64.0	1	100.0
Employer satisfaction with outcomes	12.5	33.3	54.1	5	99.9

* May not add to 100% due to rounding.

Note that in Table II-13 we crudely rank ordered success factors according to the mean scale scores. The rank ordering is as follows: participant satisfaction, freedom given by the school system, flexibility in meeting business/industry needs, effective promotion/publicity, employer satisfaction with outcomes, well-defined program objectives, image/visibility of my agency, good communication with business and industry, clear division of program responsibilities, strong business and industry support or interest.

The factors that contribute to successful cooperation seem to be the kind that make for success in general in most public school adult education programming. They include learner satisfaction, autonomy, flexibility in meeting needs, and effective promotion/publicity. We might speculate, then, that successful cooperators are applying the same facilitating principles with business and industry that they apply with their other programming. Effective application of these basic principles seems to pay off in success at cooperation. At the same time, facilitating factors unique to industry such as strong business and industry support or interest, clear division of program responsibilities, and good communication with business and industry are seen as less important contributors to success.

In summation, we can say that directors perceive two types of barriers limiting cooperation with business and industry. The first type pertains to a scarcity of operating resources, specifically time and money, and appears to be a common barrier limiting programming in general. The second type of barrier is specific to the business and industry situation and pertains to a low degree of value which business and industry are perceived to place on the services rendered by public school adult education programs. This low degree of value is manifest in lack of business and industry interest in adult education, private sector interest in profit rather than education, and lack of commitment by business and industry to cooperative efforts.

When we examine facilitators, that is factors rated important in promoting the success of successful cooperators, we find that the most important facilitators are consonant with good programming in general. Among them are learner satisfaction, autonomy, and a flexibility to meet needs. Facilitating factors unique to the business and industry situation, such as strong business and industry support or interest and good communication with business and industry, are rated considerably lower in importance.

Strategies for Building Cooperation: Their Nature and Efficacy

If cooperation between public school adult education and business and industry is desirable, analysis of the strategies used to effect cooperation is vital. Such an analysis has two components, a component that describes the strategies used and a component that analyses the success of various strategies.

From a descriptive perspective, the great majority of those programs that cooperate with business and industry use one or more of five methods of reaching business and industry. Those methods, and their incidence of use are shown below.

Table II-14

Incidence of Public School Adult Education Program Use of Various Methods for Establishing Cooperation With Business and Industry, in Percent

(N = 36)

Method	Percent of Programs Using Method
Phone contact with business/industry personnel	97.1
Building on contacts through informal community social activities	91.4
Brochure mailing to business/industry	91.4
Letters sent to business/industry	85.7
Building on contacts through formal association/council meetings	79.4

Given the high incidence of use of each method among cooperators with business and industry, it is probably safe to assume that most programs use multiple methods in establishing cooperation.

The most important issue, however, pertains to the effectiveness of methods. Cooperators with business and industry were asked to rate the effectiveness of each method they had used. The results are shown in Table II-15.

Table II-15

Directors' Effectiveness Ratings of Methods Used to Establish Cooperation With Business and Industry, in Percent

(N = 35)

	Effectiveness Rating				
Method	Ineffective	Moderately Effective	Very Effective	Not Used	Totals*
Brochure mailing to business and industry	11.5	59.9	20.0	8.6	100.0
Letters sent to business and industry	14.3	45.6	25.7	14.3	99.9
Building on contacts through formal association/council meetings	17.7	41.1	20.6	20.6	100.0
Building on contacts through informal community social activities	8.6	51.3	31.4	8.6	99.9
Phone contact with business and industry personnel	0	54.2	42.9	2.9	100.0

* May not add to 100% due to rounding.

The only strategy that stands out as being more effective than others appears to be phone contact with business and industry, the method which is also the most commonly used.

The population for the preceding analysis was comprised of all programs that indicated they had cooperated with business and industry during the past year. If we break this population down into our groups of successful cooperators and unsuccessful cooperators, a refined analysis of strategy success can be portrayed.

Table II-16

Successful and Unsuccessful Cooperators' Mean Scores For Effectiveness of Methods of Establishing Cooperation With Business and Industry

	Mean Effectiveness Scores	
Method	Successful Cooperators (N = 16)	Unsuccessful Cooperators (N = 17)
Brochure mailing to business/industry	4.8 *	2.9 *
Letters sent to business/industry	4.5 *	2.8 *
Building on contacts through formal association/council meetings	3.8	2.8
Building on contacts through informal community social activities	4.7	3.9
Phone contact with business/industry personnel	5.8 *	4.5 *

* Significant at .05 level (two-tailed t-test)

Unsuccessful cooperators rate all strategies less effective than successful cooperators and for brochure mailing, letters sent to business and industry, and phone contact with business/industry personnel the differences are significant at the .05 level.

It is important to discuss one final finding regarding strategy for establishing cooperation. Of those programs which have cooperated with business and industry during the year, 21.7 percent indicated that the majority of their cooperative programs were initiated after business and industry had contacted them; 4.3 percent indicated that a third party such as CETA initiated contact; and 73.9 percent indicated that their program contacted business and industry. Clearly, cooperators with business and industry are generally taking the initiative in engendering such cooperation.

PART III

COOPERATION WITH EDUCATIONAL INSTITUTIONS FROM THE PERSPECTIVE OF NEW JERSEY BUSINESS & INDUSTRY

This section analyzes education/industry cooperation from the viewpoint of training and development personnel in New Jersey business and industry. It begins with a description, by size and Standard Industrial Code classification, of the 85 businesses and industries that comprised the final survey sample. Next, the goals and objectives of education and training in the industrial sector are reviewed and the types of educational organizations with which business and industry collaborate are described. The remainder of the findings section addresses the following specific issues concerning industry/education cooperation: (1) locus of responsibility for planning and implementing cooperative educational activities; (2) factors responsible for successful joint educational programming; (3) benefits and costs associated with cooperative educational programming; (4) relative potential for cooperative programming of selected activities and subjects; (5) impediments or barriers to developing cooperative relationships with public school adult education programs. Finally, the principal findings are reviewed and conclusions drawn concerning industry/education cooperation. Emphasis is placed on the potential for closer linkages with public school adult education programs.

Characteristics of the Sample

As discussed in the methodology section, larger businesses and industries were purposefully oversampled because they are much more likely than smaller ones to sponsor organized training and development activities. The 85 organizations in the final sample ranged in size from 107 to 5,000 employees. The mean size was 750 employees, considerably larger than the typical private sector business enterprise. Nevertheless, a third of the organizations in the sample employed 250 people or less, and thus can be considered relatively small companies. The median size of the sample companies was 361. In the analyses that follow, "smaller" companies are those that fall below the median and "larger" companies are those with 361 or more employees.

The types of companies varied from large manufacturers to much smaller financial, insurance and service organizations. All told, two-thirds of the sample consisted of manufacturing corporations, 14.8 percent were classified in the wholesale/retail trade sector, 7.4 percent were financial, insurance or real estate firms, and the remaining 11.1

percent were service-sector organizations. These percentages parallel closely the characteristics of the initial stratified random sample of New Jersey business and industry based on the Standard Industrial Code. For data analysis purposes, the 85 companies were dichotomized to permit comparisons between manufacturing organizations and those in other sectors of the economy, that is those not engaged in the production of goods.

Corporate Education and Training Objectives

The goals or objectives of education and training in private sector organizations are obviously important to gaining a better appreciation of the potential for industry/education collaboration. Business and industry respondents were asked to rate on a seven-point scale the importance to their organizations of each of eight educational goals.* The results are shown in Table III-1.

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* To facilitate interpretation of the findings, all seven-point scales in this and subsequent frequency tables were collapsed into three categories as follows: 1,2=1 or "low"; 3,4,5=2 or "mid-range"; 6,7=3 or "high."

Table III-1 *

Importance for Business and Industry of Selected Educational Goals, in Percent

(N = 84)

Goals	Little or No Importance	Some Importance	Great Importance	Totals**
Orient new employees to organization	7.1	34.5	58.3	99.9
Facilitate individual employees' growth and development	3.6	41.7	54.8	100.1
Improve human relations skills of management personnel	4.8	35.7	59.5	100.0
Enhance employee motivation	3.6	38.1	58.3	100.0
Increase productivity	3.6	23.8	72.6	100.0
Facilitate technological or procedural changes	7.1	39.3	53.6	100.0
Facilitate compliance with safety standards or other government regulations	6.0	32.1	61.9	100.0
Fulfill affirmative action requirements	7.1	34.5	58.3	99.9

** May not add to 100% due to rounding.

In looking at Table III-1, one is immediately struck by the uniformity of the responses. In general, about three-fifths of the respondents ranked each of the training goals as very important. Fewer than 10 percent ranked any of the eight goals as "unimportant." To "increase productivity" did receive more emphasis than the other goals, but this is hardly surprising given the value system of private enterprise. Cross-tabulation analysis of goals by size and type of industry and by collaboration/non-collaboration with public school adult education agencies yielded few associations of substantive import. Consequently, it would seem that all of the goals listed above are important, regardless of organizational size, type or status as a collaborator with public school adult education agencies.

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* For this and all other tables the number of cases is the maximum for a particular set of items. For any one item, there may be one or two missing cases.

Closeness of Ties to Educational Organizations

Another fundamental question in examining cooperation is what kinds of educational organizations do business and industry cooperate with in providing training to their employees? Respondents were asked to rate how closely they cooperated over the past two years with each of seven types of educational organizations. If they did not cooperate at all with a particular type of institution, they were asked to so indicate. The results are shown in Table III-2.*

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* Note: Only those respondents who previously indicated that they had, within the past two years, cooperated with at least one public educational institution were included in this and most subsequent analyses. This affirmative category consisted of 53 percent of the sample (N = 44). One of these 44 did not, however, respond to the items listed in Table III-2.

Table III-2

Closeness of Cooperation Between Business and Industry and Various Types of Educational Organizations, in Percent

(N = 43)

Type of Organization	No Cooperation	Closeness of Cooperation Not too Close	Somewhat Close	Very Close	Totals*
Private training/development consulting firm	44.2	14.0	25.6	16.3	100.1
Professional or trade associations (ASTD, ASPA, AMA, etc.)	19.0	23.8	42.9	14.3	100.0
Public universities	33.3	7.1	35.7	23.8	99.9
Private universities/colleges	36.6	12.2	31.7	19.5	100.0
Public 4-yr. colleges	36.6	31.7	22.0	9.8	100.1
Community colleges	16.3	25.6	39.5	18.6	100.0
Public school adult education programs	33.3	28.0	20.5	18.2	100.0

* May not add to 100% due to rounding.

One again, the responses tend toward uniformity, although there are variations worthy of note. Particularly interesting is that nearly half the sample reported no cooperation at all with private training/development consulting firms. While cooperation with professional and trade associations was more widespread, only 14.3 percent of respondents indicated very close cooperation with these providers of industry-oriented educational services. The data suggest that, by and large, businesses and industries tend to cooperate with traditional educational providers (particularly community colleges) in cooperative efforts to meet their employees' educational and training needs. With the exception of community colleges, public school adult education agencies seem to be utilized to about the same extent as other educational institutions. This is inferred from examining the percentage distributions under "No cooperation" in Table III-2.

Additional analyses revealed no meaningful associations between industry type or size and closeness of cooperation with different kinds of adult education provider organizations. There was, however, a strong relationship between size and whether or not an industry had had any cooperative relationships with educational institutions over the preceding two years. Of the smaller companies, only 32.5 percent indicated they had cooperated with educational institutions compared with 72.1 percent for the larger companies ($x^2 = 11.5$, df = 1, $p < .001$).

Locus of Responsibility for Programming Activities

For those companies that do cooperate with educational organizations in providing learning opportunities for employees, it is important to examine the division of labor and responsibility concerning crucial aspects of program planning and implementation. Respondents were asked, "In general, in cooperating with public educational institutions (universities, colleges, public schools) which party had major responsibility for each of the activities listed below"? The findings are shown in Table III-3.

Table III-3

Locus of Major Responsibility for Cooperative Program Planning and Implementation Activities, in Percent

(N = 42)

	Major Responsibility				
Activity	Business or Industry	Educ. Institution	Shared	Not Applicable	Totals*
Developing/approving program content, objectives	21.4	26.2	45.2	7.1	99.9
Providing classroom facilities	31.0	54.8	11.9	2.4	100.1
Providing instructors	9.5	64.3	21.4	4.8	100.0
Providing instr. materials	9.5	61.9	23.8	4.8	100.0
Providing publicity/ promotion	24.4	12.2	36.6	26.8	100.0
Providing cost of released time, or monetary incentives for employees	73.8	2.4	4.8	19.0	100.0
Recruiting participants	57.1	4.8	23.8	14.3	100.0
Providing supervision of work-related training	54.8	2.4	16.7	26.2	100.1
Evaluating program outcomes	38.1	4.8	52.4	4.8	100.1

* May not add to 100% due to rounding.

As Table III-3 shows, there is considerable variability in locus of responsibility, depending in part on the nature of a particular activity or task. Particularly striking is that very few activities are the dominant concern of one or the other linking partner. Developing content or objectives, for example, is a shared responsibility in 45 percent of the cases, but in the remaining instances (excluding the "non applicables") it is about evenly split between the company and the educational institution. In general, educational institutions have greater responsibility for providing instructors, materials and facilities while companies play the larger role in recruiting participants, compensating them, and supervisiong work-related training. Shared responsibility is more prevalent than either business/industry or educational institution responsibility for developing content or objectives, providing publicity or promotion, and evaluating program outcomes. It is interesting to observe that providing publicity and compensating employees through released time or monetary incentives were checked as not applicable by roughly a fifth to a quarter of the respondents. Of the activities listed above, four might be considered of a fundamentally educational nature: deciding what will be taught; deciding who will teach it; determining the instructional materials to be used; and evaluating learning outcomes. Educational institutions tend to have primary or shared responsibility for the second and third activities. What will be taught ("developing/approving content, objectives") and evaluating outcomes are less likely, in contrast, to be seen as shared or educational institution responsibilities. One might speculate that decision-making in this core educational arena could on occasion involve tension if not conflict in developing cooperative programs. Additional analyses crosstabulating responsibility for program activities by industry type and size and collaboration/non-collaboration with public school adult education programs yielded no significant findings.

Important Factors in Implementing Joint Programs

The initial interviews with training directors in business and industry revealed several factors they considered important in implementing joint programs for employee training and development. These factors, subsequently included in the questionnaire, are listed in Table III-4 along with the importance ratings assigned by the respondents whose companies had in the past two years cooperated with public educational institutions.

Table III-4

Importance Assigned by Business and Industry To Selected Factors in Implementing Joint Educational Programs, in Percent

(N = 41)

	Importance in Joint Programming			
Factor	Not Important	Somewhat Important	Very Important	Totals
Flexible scheduling of activities by the ed. institution(s)	5.0	40.0	55.0	100.0
A clear understanding of each party's responsibilities	4.9	34.1	61.0	100.0
Well-defined program objectives	4.9	26.8	68.3	100.0
Effective promotion/publicity	22.0	46.3	31.7	100.0
Well-established lines of communication	7.3	36.6	56.1	100.0
Demonstrably successful results of training activity	2.5	40.0	57.5	100.0
Cost-effectiveness of training activity	7.5	40.0	52.5	100.0

With the exception of "effective promotion/publicity," all the factors listed in Table III-4 were considered very important by a plurality of respondents. Additional analyses showed that type and size of company had little discernible association with importance ratings. The lower rating of promotion/publicity probably reflects the fact that to some extent employee development deals with a "captive audience," or at least one that is relatively easy to recruit. It is noteworthy, but hardly surprising, that "well-defined program objectives" was the one factor rated "very important" by more than two-thirds of the respondents.

Costs and Benefits of Cooperative Programming

Clearly, the prospects for collaboration between industry and educational institutions will be better if the benefits of cooperation are perceived to be greater than the costs. To obtain a rough measure of costs and benefits, industry respondents were asked these questions: (1) "Based on your experience during the past two years, to what extent were the following benefits realized by your organization as a result of cooperative programming with public educational institutions in general?"; (2) "Based upon your experience during the last two years, to what extent has cooperative involvement with educational institutions resulted in the following costs?" The results are shown in Tables III-5 and III-6.

Table III-5

Extent of Benefits Realized by Business and Industry As a Result of Cooperative Programming with Public Educational Institutions, in Percent

(N = 38)

Benefits	Extent Realized Little or No Extent	Some Extent	Great Extent	Totals*
Decreased cost of training/ development	43.2	37.8	18.9	99.9
Access to needed facilities, equipment or materials	39.5	31.6	28.9	100.0
Access to instructional expertise	13.5	37.8	48.6	99.9
Positive public relations for our org.	24.3	59.5	16.2	100.0
Increased employee job satisfaction (decreased grievance rate, turnover, absenteeism, etc.)	18.9	54.1	27.0	100.0
Increased productivity or effectiveness of employees	5.4	64.9	29.7	100.0

* May not add to 100% due to rounding.

Table III-6

Extent of Costs Incurred by Business and Industry As a Result of Cooperative Programming with Public Educational Institutions, in Percent

(N = 38)

Costs	Little or No Extent	Some Extent	Great Extent	Totals*
		Extent Incurred		
Excessive expenditure of time	43.2	48.6	8.1	99.9
Scheduling difficulties	29.7	59.5	10.8	100.0
Excessive costs (release time, etc.)	40.5	54.1	5.4	100.0
Unfavorable publicity	86.8	13.2	0	100.0
Labor(union)/management conflict	84.2	13.2	2.6	100.0
Disruption of our own organizational(unit) activities	70.3	24.3	5.4	100.0
Employee dissatisfaction with training/development activities (usefulness, access, etc.)	67.6	29.7	2.7	100.0

* May not add to 100% due to rounding.

Comparison of Tables III-5 and III-6 shows that benefits are perceived to be greater than costs by a wide margin. The most important benefit is clearly "access to instructional expertise." In addition, nearly all the other benefits listed were felt to have been achieved to some or to a great extent by 75 to 95 percent of the respondents. The only exceptions were "decreased cost of training/development" and "access to needed facilities, equipment or materials."

In regard to costs, it is noteworthy that four of the seven listed were rated as insignificant by two-thirds or more of the respondents. However, a majority of respondents perceived the following costs to have been incurred at least to some extent: excessive expenditure of time, scheduling difficulties, and excessive outlays, for example in the form of released time for training. While this last cost may be difficult to avoid, the other two can be mitigated if both linking partners are aware of them and determined to keep them in bounds. Further analyses revealed that two of the cost factors were correlated with company size. Larger companies were somewhat more likely to report scheduling difficulties as a cost (tau = .26, $p < .05$)* as well as unfavorable publicity (tau = .26, $p < .05$). While the former finding is not surprising given the potential logistical problems in scheduling training in large organizations, the latter (accounted for by only five cases) is somewhat puzzling.

Knowing what business and industry perceive as the costs and benefits of collaborative programming is of course vitally important to educational institutions interested in developing cooperative ventures. Of equal or even greater importance is knowing what activities or subjects business and industry see as having the greatest potential for collaboration. All respondents were asked the following question: "For each of the activities or resources listed below, how great is the potential for collaboration between your company and a public educational institution"? The results are shown in Table III-7.

Table III-7

Potential of Selected Activities for Collaborative Relationships with Public Educational Institutions, as Perceived by Business and Industry, in Percent

(N = 84)

Activities	Little or No Potential	Some Potential	Great Potential	Totals**
Training in management or organizational theory for administrative staff	34.1	42.7	23.2	100.0
Training in human relations skills or leadership for supervisors/managers	30.1	41.0	28.9	100.0
Training in affirmative action/equal opportunity employment for personnel staff	33.7	45.8	20.5	100.0

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* Since size as categorized here and extent of costs incurred are ordinal variables, a non-parametric measure of association is more appropriate than Chi Square. Kendall's tau produces a correlation coefficient that is mathematically similar to the Pearson r and which can be interpreted similarly.

** May not add to 100% due to rounding.

Table III-7, Continued

Activities	Little or No Potential	Some Potential	Great Potential	Totals*
Training in job counseling for personnel staff	41.7	47.6	10.7	100.0
Administrative/supervisory training in labor relations	35.7	48.6	15.6	99.9
Entry-level training or updating for technical or production employees	51.2	28.6	20.2	100.0
Entry-level training or updating for clerical/office employees	46.4	44.0	9.5	99.9
Training for staff/line employees in implementing government regulations(e.g., safety standards, etc.)	41.7	46.4	11.9	100.0
Basic skills education (English, math, reading) for educationally disadvantaged employees	51.8	36.1	12.0	99.9
High school completion programs for employees lacking a diploma	51.8	41.0	7.2	100.0
Training in customer relations skills	54.2	36.1	9.6	99.9
Use of facilities for classes/conferences	57.8	26.5	15.7	100.0
Vocational/psychological testing services	63.1	33.3	3.6	100.0
Sharing of training specialists, program developers, instructors or evaluators	41.0	43.4	15.7	100.1
Sharing of instructional materials	38.6	49.4	12.0	100.0

* May not add to 100% due to rounding.

A majority of the activities listed in Table III-7 are perceived as having some potential for collaboration with educational institutions, but not "great potential." Roughly one-fifth of the respondents rated the following activities as having "great potential": training in management or organizational theory for administrative staff; training in human relations skills or leadership skills for supervisors/managers; training in affirmative action/equal opportunity employment for personnel staff; and entry-level training or updating for technical or production employees. Interestingly, three of these four subjects are geared to the needs of management employees as opposed to clerical, production and other lower-ranking personnel. Several of the activities and subjects were rated as having "great potential" by fewer than 10 percent of the respondents. Included were entry-level training or updating for clerical/office employees; high school completion programs for employees lacking a diploma; training in customer relations skills; and vocational/psychological testing services. Of these four low-rated activities, two are addressed to the needs of lower-level employees. On balance, most of the subjects or activities rated as having some or great potential are more likely to be provided by colleges and universities than by public school adult education agencies.

Additional analyses revealed that several areas of potential collaboration were related to industry type and size. Smaller companies rated the following activities as having greater potential for collaboration than did larger companies: entry-level training or updating for technical or production employees; entry-level training or updating for clerical/office employees; and training for staff/line employees in implementing government regulations.* Larger companies, however, rated high school completion programs as having greater potential for collaboration than did smaller companies (tau = .28, $p < .01$). Not surprisingly, non-manufacturing companies (e.g., in the finance, trade and service sectors) rated training in customer relations skills as having greater potential for collaboration than did manufacturing companies ($x^2 = 9.3$, df = 2, $p < .01$). So, too, did smaller companies (tau = -.19, $p < .05$). These are overrepresented in the non-manufacturing sector.

The findings related to small-company priorities might reflect their lesser resources for training in the more fundamental high-need areas. Larger companies are likely to have large numbers of employees without a high school credential, which probably accounts for their rating high school completion programs as having greater potential for collaboration. The explanation for the findings in regard to customer relations skills would seem to be self-evident.

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* Kendall's tau = -.21 ($p < .05$), -.23 ($p < .05$) and -.24 ($p < .05$), respectively.

Barriers to Cooperation with Public Schools

In the final section of the questionnaire, business and industry respondents were asked about their perceptions of potential barriers to cooperative programming with public school adult education agencies. The question was worded as follows: "To what extent do you perceive the following factors as barriers to developing effective cooperation with adult education programs based in public schools"? The results are shown in Table III-8.

Table III-8

Extent to Which Selected Factors are Perceived by Business and Industry as Barriers to Cooperation with Public School Adult Education Programs, in Percent

(N = 80)

Factors	Extent Factors Perceived as Barriers: Little or No Extent	Some Extent	Great Extent	Totals*
Limited time available for cooperative program planning	26.3	50.0	23.8	100.1
Inadequate communications with adult schools	27.5	50.0	22.5	100.0
Poor performance of public school education in general	27.8	54.4	17.7	99.9
Poor understanding by public school personnel of our company's training needs	25.0	42.1	32.9	100.0
Poor quality of adult school offerings	34.6	50.0	15.4	100.0
Lack of interest of public education in private sector training/development	24.4	60.3	15.4	100.1
Potential scheduling problems	32.5	36.3	31.3	100.1
Lack of funds for cooperative programming	36.4	44.2	19.5	100.1

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* May not add to 100% due to rounding.

Table III-8, Continued

Factors	Extent Factors Perceived as Barriers Little or No Extent	 Some Extent	 Great Extent	 Totals*
Differences between goals of public sector education and those of training in business/industry	24.1	48.1	27.8	100.0
Lack of support by our company's officers	41.8	45.6	12.7	100.1
Lack of relevance of much public education to the real world of business	25.6	38.5	35.9	100.0
Lack of flexibility of public schools	27.8	55.7	16.5	100.0
It is more cost-effective to train employees ourselves	27.3	33.8	39.0	100.1
Contractual arrangements with public educational institutions are too difficult or time consuming	35.5	46.1	18.4	100.0
Cooperation with public educational institutions could potentially disrupt our own activities	53.2	39.0	7.8	100.0
Prior cooperative efforts with public educational institutions were unsuccessful	74.7	14.7	10.7	100.1
Adult schools focus on leisure time activities	44.2	37.7	18.2	100.1
Adult school instructors are generally not qualified to train our employees	35.5	38.2	26.3	100.0

* May not add to 100% due to rounding.

Even a quick glance at Table III-8 suggests that business and industry personnel perceive many factors as potential impediments to cooperation with public school organizations. Specifically, about a third of the respondents saw four barriers as potentially inhibiting cooperation to a "great extent." These barriers are "poor understanding by public school personnel of our company's training needs"; "potential scheduling problems"; "lack of relevance of much public education to real world of business"; and "it is more cost-effective to train employees ourselves." It is interesting to note that scheduling problems are perceived by the total sample as a significant barrier, while earlier, when queried about actual "costs," scheduling difficulties were rated by businesses that actually collaborated with educational institutions as somewhat less significant. The "poor understanding" and "lack of relevance" barriers are not surprising, although the extent to which they reflect misperceptions as opposed to the realities of public school programs is unknown.

The least significant barriers, rated by two-fifths or more of the respondents as impeding cooperation to "little or no extent," were "lack of support by our company's officers"; "cooperation . . . could potentially disrupt our own organizations' activities"; "prior cooperative efforts with public educational institutions were unsuccessful"; and "adult schools focus on leisure time activities." It is noteworthy that the disruption factor was also seen by most respondents as a negligible cost in actual cooperative programming efforts.

Further analyses revealed little connection between perceived barriers and industry size and type and status as a collaborator/noncollaborator with public school adult education programs. There was, however, one significant finding in regard to the item "it is more cost-effective to train employees ourselves." Lack of cost-effectiveness was perceived as inhibiting cooperation "to a great extent" by 60 percent of the non-manufacturing companies, but by only 30 percent of manufacturers ($x^2 = 7.6$, $df = 2$, $p < .02$). Why wholesale/retail, finance and real estate corporations should respond in this way is not clear. While the data were not statistically significant (perhaps because of the small number of relevant cases—about 40), there was a consistent trend for companies that had previously collaborated with public adult schools to perceive the potential barriers as less severe.

Summary and Conclusion

While sharp and sweeping generalizations are difficult to make, certain trends are discernible in the data and worth noting. One important finding, for example, is that slightly over half the sample reported cooperation with some kind of educational organization over the past two years. Of these "general cooperators," two-thirds reported that they had worked with public school adult education programs. Thus, nearly a third of the businesses and industries in the total sample had linked in some way with public school adult education units. Furthermore, it is clear that business and industry collaborate much more frequently with traditional educational providers (especially community colleges) than with private training and development consulting firms and training-oriented organizations such as the American Management Associations.

Among the more specific findings related to success of joint programming and its costs and benefits from industry's perspective are the following. In implementing successful cooperative programs, the most important factor is agreement on well-defined program objectives. The least important factor is effective promotion and publicity. Regarding benefits, access to instructional expertise was ranked higher than any other, including decreased training costs and increased employee productivity. The greatest cost was scheduling difficulties, followed by excessive expenditure of time. Most important, however, is that benefits were seen to far outweigh costs in working collaboratively with public educational institutions.

Activities seen as having the highest potential for cooperative programming were mainly related to management and supervisory training. Basic skills education and high school completion programs were accorded a decidedly lower priority. Interestingly, in several areas, namely entry-level training or updating for technical, production, and clerical/ office employees and training in implementing government regulations, smaller companies reported greater potential for collaboration than did larger companies. However, larger companies saw high school completion programming as having higher potential than did their smaller counterparts. Finally, the respondents reported that a large number of factors constituted at least moderately severe barriers to effective cooperation with public school adult education agencies. Two of the barriers considered most serious were poor understanding by public school personnel of corporate training needs and irrelevance of much public education to the real world of business. Even if these perceptions are inaccurate—and in some cases they are—they nonetheless pose obstacles to closer ties between public school adult education and business and industry.

Despite the existence of attitudinal barriers such as those just mentioned, there seems to be considerable interest on industry's part in cooperative programming with educational institutions. In the researchers' opinion, there is a great deal that is taught by business and industry that could conceivably be taught as well or better by educators in public sector institutions. The fact that half the sample collaborated with educational institutions over the last two years provides strong support for this assertion. Moreover, those companies that have worked with educational institutions report that benefits far exceed the costs. While many of industry's needs, or at least wants, can best be serviced by industry itself or by colleges and universities, there is a definite if smaller role to be played by the public schools. The potential of the schools seems greatest in the area of short-term vocational upgrading for clerical and other white collar workers. There is some demand, but less, for high school completion programming. The continuing education of today's workforce is a very big business. In the 1980s, we would suggest, it may be too big for business to cope with on its own.

PART IV

SUMMARY AND CONCLUSIONS

Summary of Findings

A general summary of findings is presented here. Greater detail can be found in the summary sections of the preceding chapters.

1. Although almost two-thirds of the public school adult education programs indicate that they had cooperated with business and industry in some fashion during the previous year (1978), the great majority of programs neither co-sponsored classes with business and industry nor received student referrals.

2. Public school adult education programs cooperate most closely with proprietary schools, less closely with other kinds of organizations, for example in the service sector, and least closely with large and medium sized manufacturing firms.

3. Organizational, director background and environmental variables that have proved to be important predictors of public school adult program behavior in the past do not affect success of cooperation with business and industry to an appreciable degree. Among these variables are: the number of years the director has directed adult education; the number of hours per week the director devotes strictly to adult education; the average number of hours per week the director spends contacting community members; total enrollment; total budget; degree of urbanization of the district; and educational attainment level of the district.

4. A program emphasis on undereducated adults (ABE/ESL/HSC) is associated with non-cooperation and unsuccessful cooperation with business and industry.

5. Directors who report success at cooperation with business and industry are more likely to value cooperation than those who report lack of success at cooperation.

6. Although in respect to perceived severity of internal program barriers to cooperation, such as time and money, there is little difference between successful and unsuccessful cooperators with business and industry, there are differences in respect to barriers associated with the relationship of public school programs to

business and industry. Specifically, unsuccessful cooperators are considerably more likely to see such variables as poor communication, lack of business and industry interest, and private sector interest in profit rather than education as being limiting factors.

7. Directors report substantial benefit from cooperation. The areas of greatest perceived benefit from business and industry cooperation seem to be increased enrollments, increased program visibility, increased access to needed instructional expertise, and increased influence in the community.

8. Perceived costs to cooperation with business and industry were clearly minimal. Time expenditures, scheduling problems, fiscal expenditures and programming "hassles" were the greatest costs, although as noted, they were not severe.

9. The barriers to cooperation with business and industry which were reported to be most important are constraints on time, lack of funds, poor communication, lack of business and industry interest, and the assessment that private industry is interested in profit rather than education.

10. Directors who have cooperated with business and industry report that the most important factors promoting successful cooperation are learner satisfaction, autonomy, and flexibility to meet needs. These are general facilitators applicable to good programming across all areas. Facilitating factors unique to business and industry cooperation, such as strong business and industry support, were ranked lower in importance.

11. Most programs use multiple methods in establishing cooperation. The method noted as being most effective was phone contact with business and industry personnel.

12. The great majority of public school adult education programs which cooperate with business and industry initiated the contact which resulted in the cooperative effort.

13. Business and industry respondents rate eight selected education and training goals to be of approximately equal importance to their companies. Increasing productivity was somewhat more important than the others.

14. Larger companies are more likely to cooperate with educational institutions than smaller companies.

15. In general, educational institutions are reported as having greater responsibility for providing instructors, materials, and facilities while companies play the larger role in recruiting participants, compensating them, and supervising work-related training.

16. Business and industry respondents report that the benefits of coop-

eration with public educational institutions considerably outweigh the costs.

17. Business and industry respondents do not on the whole see great potential for cooperation in any of the fifteen areas listed. The areas of greatest potential noted are: training in management or organizational theory for administrative staff; training in human relations skills or leadership for supervisors/managers; training in affirmative action/equal opportunity employment for personnel staff; and administrative/supervisory training in labor relations.

18. The three barriers to cooperation with public school programs rated as being greatest among the eighteen listed were: "poor understanding by public school personnel of our company's training needs"; "lack of relevance of much public education to the real world of business"; and "it's more cost-effective to train employees ourselves." All barriers listed were ranked as being of at least some importance by the majority of respondents except "cooperation with public educational institutions could potentially disrupt our own activities."

Conclusions

The study reported here is rather intricate, a factor which makes drawing general conclusions difficult if one is to resist the temptation of oversimplification. Nevertheless, we do feel comfortable in making several general observations that are supported by the findings. Emphasis will be given here to conclusions pertaining to the public schools. The first concerns the general relationship between public school adult education programs and business and industry.

Public school adult education programs are agencies of public school systems established to provide a broad spectrum of offerings to the general public. They are funded principally through learner fees and thus must provide what the public is willing to pay for to stay in business. This leads to what might be termed a learner/community focus. The program focuses on meeting learner wants within a community context.

In contrast, business and industry employs adult education instrumentally to meet organizational goals, goals which ultimately relate to making a profit. This becomes quite clear when Table III-1 (p.III-3) is examined. While public school adult education operates in a community context, business and industry operates within a commercial context.

Given these significantly different orientations toward education one must ask, what is the basis for cooperation? What needs can each party fulfill for the other? What is gained versus what is lost?

Of the various kinds of businesses, public school programs most commonly cooperate with proprietary "schools"—not vocational proprietary schools but Smoke Enders and the like. This is no accident, for the relationship fulfills needs of both parties. For the proprietary school adult education is its product. Proprietary schools gain clients and a piece of the take while adult schools gain competent instruction in an area of high demand and also a piece of the take. Most importantly, neither party must significantly modify its basic plan of operation.

For business and industry other than these "proprietary schools" the picture is quite different. For these organizations education is not their product; it is a means for improving organizational productivity. If public school adult programs want to cooperate with these companies, a basic modification in operating style and orientation may be necessary. This is evidenced by the fact that the majority of industries contacted felt that the following factors were barriers to cooperation, at least to some extent: inadequate communication with adult schools; poor performance of public school education in general; poor understanding of industry's personnel and training needs; poor quality of adult school offerings; lack of interest of public education in private sector training/development; differences in goals; lack of relevance and lack of flexibility. From the other side of the fence, lack of business and industry interest was considered at least a moderate barrier to cooperation by 84 percent of the public school directors. The differences between the two types of organizations are sharply drawn.

Since it is unrealistic to expect business and industry to modify its operations to fit better the public school model, public school programs will probably have to make the necessary changes. These may include the following.

- Public school programs must organize instructional expertise in the knowledge and skill areas needed or at least wanted by business and industry.
- Public school programs need to engage in image modification. That is to say, they must build the perception that they are able to meet business and industry needs effectively.
- Public school personnel must become familiar with the style, orientation, and ethics of business and industry if productive communication is to be enhanced.

Despite the major differences between the public school adult education arena and business and industry, some cooperation does indeed take place—cooperation defined as successful by public school directors. What are the ingredients of this success?

In dealing with this question the first thing of note is that most of the organizational, director background, and environmental variables that one would expect to promote successful cooperation do not. Program size, affluence, location, and district educational level just do not make the difference. What does seem to promote success in cooperation is the application of sound operating principles which apply to adult programming in general. By this we mean such things as meeting learner needs, program autonomy and flexibility, and effective promotion.

A major issue pertains to the role of public sector basic skills instruction (ABE/ESL/HSC) in relation to business and industry. Our data appears to be conclusive: ABE/ESL/HSC has not been a particularly fertile area for cooperation. The findings suggest (see Table III-7) that business and industry simply does not consider basic skills education for its employees to be an organizational priority. Granted, industry needs workers with basic skills. But in an era of a labor surplus, the desired basic skill mix among employees may be achieved through hiring/screening at no cost. Providing ABE/ESL/HSC instruction requires the company to expend some effort, if not hard cash.

The new "competency based" adult high schools may be another story, although their potential appears not to have been tapped. For many reasons, which are clear in Table III-8, business and industry generally prefers to train its own employees rather than to send them elsewhere. If training programs and work experience could be reviewed by adult high schools and credit assessed in such a way that industry could in effect grant high school credit merely by certifying training or experience, great benefit might accrue to all at little cost. The adult high schools would gain clients and a valid vehicle for certification of leaner accomplishment, while business and industry would be providing a valuable benefit to employees at virtually no cost.

Our final observation relates to the notion of costs and benefits. When cooperation does occur between public schools and business and industry, both parties agree that the benefits outweigh the costs. Although public school adult education programs may find cooperating with business and industry to be difficult to consummate, there are substantial rewards to be reaped in the long run.

APPENDICES

Appendix I

FACILITATING COOPERATION WITH BUSINESS/INDUSTRY
PSAE INTERVIEW SCHEDULE

Interviewer: ____________________

☐ Introduce self

☐ Outline general goals of project (Fact Sheet)

☐ Describe specific purpose of interview

☐ Indicate maintenance of confidentiality of information and ensure anomynity of individuals and agency in report.

PART A — OBJECTIVE DATA

I. Date of Interview ____________

Time of Interview ____________

Location of Interview ____________

____

____

____

Person Interviewed (Adult Director)

Name ____________

Address ____________

____

____

Phone ( ) ____________

II. Describe any environmental/personal factors thought significant to outcome of interview (surroundings, time limitations, personal interaction with interviewee, etc.):

III. Organizational Information

A. Consortium? ☐ Yes ☐ No

B. Staffing

1. Director: ☐ full time ☐ part time (hours ________)
2. Addtional Staff?

Position	Numbers
a. Assistant Director	
b. Teachers	
c. Coordinators	
d. Clerical Staff	
e. Paraprofessional Aide	
f. Counselors	

3. Total staff employed = ______

C. Enrollment (Size factor)

1. Total enrollment = ______ (fiscal year)

D. Program Offerings (Diversity factor)

Category	Yes	No
1. General Adult Classes		
2. ABE		
3. Citizenship (foreign born)		
4. ESL		
5. HSC (GED)		
6. Vocational/Technical		

E. Total Budget = $________________ (fiscal year)

F. Advisory Board or Council ☐ Yes ☐ No

1. If yes, frequency of meetings = ____________/year
2. If yes, number of members = ____________
3. If yes, number of members from B/I = ____________

IV. Need for follow-up on objective data (i.e. is there any significant objective data listed in Part A which was unobtainable during the interview?)

☐ No

☐ Yes (specify)

A.

B.

C.

D.

E.

PART B — SEMI-FOCUSED TOPICAL OUTLINE

I. Categories: A. Cosponsorship B. Referral C. Donor	I. Describe and categorize past, existing, or planned cooperative arrangements with business and/or industry, B/I, role and level of B/I (include type of representative dealth with).
II. Type of B/I dealt with	
III. Role level B/I representative dealt with: A. Administrative/ Managerial B. Professional/ Technical C. Labor D. Other	

II. Success/failure of Cooperative Relationships. A. Motives B. Goals C. Purposes	II. Categorize reasons for success of failure of any past, established or terminated cooperative relations with B/I: A. If there is cooperation with B/I, why has it been achieved? (goals, motives, purposes) B. If there is not cooperation, why? (motives) C. For what reasons did B/I agree to relationships? D. For terminated or abortive relationships, what went wrong?

III. Needs Categories

- A. Clients/Recruitment
- B. Funds
  - cash donations
  - in kind contributions
- C. Staff
  - instructors/tutors
  - other
- D. Facilities
  - classrooms
  - shops, etc.
- E. Instructional Materials
- F. Supportive Services
  - placement/referral
  - stipends/scholarships
  - diagnosis/testing
  - counseling
  - consumer service
  - transportation
  - volunteers
- G. Vocational/Technical Training
- H. Increased Visibility
  - publicity
  - advertising
- I. Increased Power
- J. Other (Specify)

III. Describe needs of PSAE agency which could be or are being met by cooperative relations with business and/or industry and the need PSAE would prefer to meet on its own; specify also the needs of B/I which are being met:

IV. Available Resources

I. Course offerings-Labor Related
  - A. Safety (OSHA)
  - B. Foreman Leadership
  - C. Labor History
  - D. Labor Relations
  - E. Industrial Relations
  - F. GED, HSC, ABE, ESL
  - G. Vocational/Technical Training

II. Course offerings-Management Related:
  - A. Accounting/Bookkeeping
  - B. Office Organization
  - C. Supervisor Training
  - D. Financial Planning
  - E. Management
    personnel
    production
  - F. Law
    County Government
    consumer Law
    building Codes
  - G. Purchasing
  - H. Real Estate
  - I. Other (Specify)

III. Other Resources:
  - A. Counseling (Job Related)
  - B. Diagnosis/Testing
  - C. Referral
  - D. Teachers/Tutors
  - E. Facilities
  - F. Instructional Materials
  - G. Other (Specify)

IV. Describe present course offerings or resources of existing or potential value to business and/or industry (differentiate labor related offerings from management related offerings):

V. Potential Barriers
  A. Disparate Goals/Philosophy
    organizational
    educational
  B. B/I Lack of Interest
  C. Poor Communications
  D. Scheduling Problems
  E. PSAE Director's Orientation
  F. Potential Loss of Autonomy
  G. Time Requirements
  H. Potential for Goals Displacement
  I. Geographic Distances
  J. Potential for Organizational Disruption
  K. Union/Management Relations
  L. Other (Specify)

V. Describe the factors which the adult director perceives as barriers to developing effective cooperative relations with business and/or industry (use ranking system 1-3, 1=most significant impediment):

VI. Potential Facilitators A. Knowledge B/I Needs B. Knowledge B/I Philosophy organizational educational C. Flexible Scheduling time duration location D. Improved Communications publicity group meetings E. Complimentary Goals/ Philosophy F. Existence of Interest Groups G. Career Coordinating Council H. Advisory Council I. Geographic Proximity J. Demonstrable Linkage Success K. Capabilities/Orientation of Director L. Other (Specify)	VI. Describe the factors which the adult director perceives as facilitators to developing effective cooperative relations with business and/or industry (use ranking system 1-3, 1=most likely to facilitate):

VII. Cooperative Strategies A. Improved Communications. 1. Joint Meetings 2. Advisory Council 3. Increased Publicity B. Increased Flexibilty 1. Scheduling 2. Program extensions into B/I C. Exemplary Projects or Linkages D. Other (Specify)	VII. Identify those strategies which the PSAE Adult Director indicates as most likely to facilitate cooperative interaction with business and industry (use ranking system 1-3, 1=most useful strategy).

VIII. Value and Attitude Orientation of PSAE Director Towards Cooperation with B/I: A. Positive B. Negative C. Indifferent	VIII. Elaborate upon and summarize values and attitudes orientation of the PSAE Director towards cooperative relations with business and industry:

IX. Solicit and describe any summary comments or conclusions of the PSAE director which may have been overlooked or have perceived relevance to the content of the interview:

X. Closure

☐ Express appreciation for time and cooperation of PSAE director.

☐ Reiterate importance of project to agency and adult education in New Jersey.

Appendix II

FACILITATING COOPERATION WITH BUSINESS/INDUSTRY
B/I INTERVIEW SCHEDULE

Interviewer: ______________________________

☐ Introduce Self

☐ Outline general goals of project (Fact Sheet)

☐ Describe specific purpose of interview

☐ Indicate maintenance of confidentiality of information and ensure anomynity of individuals and companies in report.

PART A — OBJECTIVE DATA

I. Date of Interview ______________

Time of Interview ______________

Location of Interview ______________

____

____

____

Person Interviewed*: ______________

Title: ______________

Address: ______________

____

____

Phone (   ) ______________

*If key contact person responsible for education/training in this organization is other than person interviewed, specify name, title, phone:

____

____

____

II. Describe any environmental/personal factors thought significant to outcomes of interview (surroundings, time limitations, personal interaction with interviewee, etc.):

III. Organizational Information

A. Organization classification (technology factor). Describe the technology and product of the company:

B. Approximate number of employees (size factor):

1. Managerial/Administrative ______
2. Professional/Technical ______
3. Production/Manufacturing ______
4. Sales/Marketing ______
5. Other (specify:
   ______________________) ______

6. Total employees = ______

☐ Small (10-249) ☐ Medium (250-999) ☐ Large (1000)

C. Existence of education/training/development in organization?

1. ☐ Yes ☐ No
2. If yes, approximate number FTE staff involved = ______
3. If yes, approximate percent work force participating = ______

   a. training/development emphasis by employee type (rank if possible 1=highest, 5=lowest):

      Management/Administrative ______
      Professional/Technical ______
      Production/Manufacturing ______
      Sales/Marketing ______
      Other (see B-5 above) ______

4. If yes, describe expenditures for education, training or development (estimate by any one of the following):

   a. Total expenditures = $__________
   b. Expenditures as % of total by business = __________%
   c. Expenditures per employee = $__________

5. Describe the existing training programs the company offers to its employees (what, for whom, for what purpose):

D. Describe the formal structural and status position of the training unit within the company or business:

PART B — SEMI-FOCUSED TOPICAL OUTLINE

I. Purposes of Education and Training:

- A. Orient new management employees to organization style, objectives.
- B. To incorporate/diffuse technological change.
- C. Ensure professional growth and career path flexibility.
- D. Avoid cost of travel and release time outside the organization.
- E. Exploit motivational influence of OJT.
- F. Fulfill legal/social responsibilities to expand employment and advancement opportunities for minorities/disadvantaged.
- G. Other (Specify)

I. Describe philosophy of organization towards education/training and development (purpose, motivation, etc):

II. Cooperative Arrangements
- A. Categories
  - 1. Cosponsorship
  - 2. Referral
  - 3. Donor
- B. Type
  - 1. Private
  - 2. Public
    - a. secondary
    - b. post secondary
    - c. graduate

II. Describe and categorize past, existing, or planned cooperative arrangement with public or private educational organizations/institutions and their perceived problems/benefits, and purposes:

III. Potential Needs
  A. Courses
    1. Management/Supervision
      a. Principles of Management
      b. Organization development
      c. Sensitivity training
      d. MBO
      e. Decision-making
      f. Interpersonal skills
      g. Equal Employment Opportunity

    2. Functional/Technical
      a. Production
      b. Maintenance
      c. Marketing
      d. Sales/Service
      e. Office Administration
      f. Finance
      g. Personnel

    3. Remedial (inc. ESL)

    4. Other
      a. Labor-related courses
      b. Vocational/Technical training

  B. Counseling
  C. Recruitment
  D. Placement
  E. Vocational/Psychological Testing
  F. Facilities
  G. Staff (teachers, tutors, etc.)
  H. Publicity
  I. Other (Specify)

III. Describe the education/training needs of company which could be or are being met by cooperative relationships with outside education agencies; identify those educational needs which the company prefers to address on its own:

IV. Available Resources
  A. Courses
    1. Management/ Supervisory
    2. Functional/ Technical
    3. Remedial
    4. Other
      a. Labor-related
      b. Vocational/ Technical

  B. Job/Career Counseling
  C. Recruitment
  D. Placement
  E. Vocational/Psychological Testing
  F. Facilities
  G. Staff
  H. Publicity
  I. Other (Specify)

IV. Identify B/I education or training resources which have or could be made available to PSAE in cooperative relationships:

V. Potential Barriers
  A. Disparate Goals/ Philosophy
    1. organizational
    2. educational

  B. Poor Communications
    1. Lack of knowledge of PSAE resources
    2. Lack of understanding of B/I needs by Public Sector

  C. B/I training sophistication

  D. Scheduling difficulties
    1. PSAE inflexibility
    2. Variability work/ productivity schedules

  E. Potential loss of autonomy
  F. Time requirements
  G. Potential Goals Displacement
  H. Potential for organizational disruption
  I. Union/management relations
  J. Geographic Distance
  K. Other (Specify)

V. Describe the factors which the individual responsible for B/I education and training perceives as barriers to developing effective cooperative relations with public schools of adult education (use ranking system 1-3, 1=most significant impediment):

VI. Potential Facilitators

- A. Improved Communications
    - 1. Group meetings
    - 2. Advisory councils
    - 3. Career coordinating council
- B. Better knowledge of PSAE resources
- C. Complimentary goals/philosophy
- D. Demonstrable success of existing linkages
- E. More flexible scheduling of PSAE offerings
    - 1. Time
    - 2. Duration
    - 3. Location
- F. Financial resources of B/I
- G. Existence of third party interest groups
- H. Geographic proximity
- I. Other (Specify)

VI. Delineate those factors which the individual responsible for B/I education and training perceives as facilitators to developing effective cooperative relations (use ranking system 1-3, 1=most likely to facilitate):

VII. Cooperative Strategies
- A. Improved Communications
  - 1. Joint Meetings
  - 2. Advisory Council
  - 3. Increased publicity
  - 4. Better understanding of B/I . needs of public sector.
- B. Increase flexibility of PSAE offerings:
  - 1. Scheduling
  - 2. Program extension into B/I
- C. Exemplary projects or linkage success
- D. Other (Specify)

VII. Identify and describe those strategies, which, if employed by the public school sector (PSAE), would be most effective in developing cooperative linkages with business and industry (use ranking system 1-3, 1=most useful strategy):

VIII. Value and Attitude Orientation of B/I training representative towards cooperation with PSAE: A. Positive B. Negative C. Indifferent	VIII. Elaborate upon and summarize the values/attitudes orientation of the B/I representative responsible for training towards PSAE cooperation.

IX. Solicity and describe any summary comments or conclusions of the PSAE director which may have been overlooked or have perceived relevance to the content of the interview:

X. Closure

☐ Express appreciation for time and cooperation of B/I individual interviewed.

☐ Reiterate importance of project to company and B/I in New Jersey.

Appendix III

FACILITATING COOPERATION WITH BUSINESS AND INDUSTRY
INTERVIEW PROTOCOL

General Description

Separate interview schedules for public school adult education directors and representative contact persons responsible for education and training in business and industry are to be utilized. Each interview schedule consists of two similar parts: Part A—Objective Data, and Part B—Semi-Focused Topical Outline. Part A is comparable to an interview "face-sheet", i.e. it is designed to gather objective information related to the interviewee and the organization he or she represents. This objective data is not intended to supplant that which will be obtained by questionnaire, but to clarify and validate its importance. It additionally serves as a basis for introduction of the interviewer, delineation of project goals, and specification of the objectives of the interview itself. Of crucial importance is the inclusion in Part A of the interview's impressions of factors potentially significant in affecting the outcome of the interview; because such factors may influence the reliability and validity of the data obtained, their recognition and description is essential in confirming the utility of the interview as a basis for developing the survey questionniare.

Part B of each interview schedule (the Semi-Focused Topical Outline) is divided into two columns. The right column consists of directives (not questions) for obtaining information relevant to the practical inquiry phase of the project. The left column is a categorical outline of topics related to the informational directives. The categorical outline was derived from a literature review and validated by sensitizing interviews with a director of a public school adult agency and a corporate specialist in staff development. It is designed to serve two purposes: (a) to facilitate data acquisition during the interview, and (b) to provide cueing for discussion when and if non-directive questions elicit unrelated or minimal responses. The categorical outline is not designed to limit either the scope or depth of responses; each topical category thus accomodates and encourages responses other than those previously researched by the interviewer.

Procedure

1. Potential interviewees will be selected from the listing of PSAE directors provided by the Bureau of Adult, Continuing and Community Education and the sample of Business and Industrial companies provided by the Department of Labor and Industry.

2. Potential interviewees will initially be contacted by explanatory letter from the project director. The letter will briefly explain the project goals and rationale and indicate that a follow up phone contact will be utilized to schedule an interview at a mutually convenient time and place. Only the directors of public school adult agencies will be solicited. Care will be taken in the phone contact with each selected business to identify and schedule the interview with that individual in the

company or corporate structure responsible for its education and training activities. If no one is so identified, a company officer possessing the informational resources necessary to provide the requisite interview data will be contacted and scheduled. If a PSAE or B/I representative declines to participate in the interview, their reasons choosing not to participate will be solicited and recorded. The next sample subject will then be selected to maintain sample size as specified in the project proposal.

3. After initial phone contact and scheduling, a confirmation letter will be sent to each interviewee. Included with the confirmation letter will be the informational "Fact Sheet" designed by the project staff. Providing the Fact Sheet prior to interview should sensitize the interviewee to the objectives of the project and expedite data acquisition during the interview itself.

4. In the interview itself, the interviewer will follow the sequence of the interview schedule and adhere to the following guidelines:

   A. If any significant objective data cannot be obtained during the interview itself, the interviewer will specify what is lacking on the interview schedule and indicate to the interviewee that follow-up correspondence will seek the additional data.

   B. Utilizing the directives for obtaining information in Part B, the interviewer will utilize semi-focused questions designed to elaborate, probe and obtain useful facts and opinions related to the topical outlines. Care must be taken to utilize cues _only_ when responses are minimal or deemed unrelated or inappropriate. All responses however should be recorded.

   C. Feedback will be provided to the interviewee regarding responses to the non-directive questions to clarify and/or validate their correct reception or meaning.

   D. Where ranking or responses is requested on the interview schedule, the interviewer will take care to focus the interviewee attention to relative valency of responses.

   E. _At the conclusion of the interview_, the interviewer will solicit additional or summary comments of the interviewee which may have been overlooked and have perceived relevance to the content of the interview. The interviewer will express appreciation for the time and cooperation of the interviewee and reiterate the importance of the project to the respective agency or company.

   F. _Immediately after the interview_, the interviewer will carefully identify those environmental/personal factors thought significant to its outcome (Part A—Heading II).

   G. _As soon as possible after the interview_, the interviewer will compile narrative field notes based upon the content of the interview schedule. The field notes will emphasize the content of Part B of the interview schedule and should conclude with _implications_ of the data obtained by interview to the practical inquiry phase of the project.

Appendix IV

PSAE INTERVIEW SAMPLE

District	Director	Date Interviewed
Millburn (57)	Eugene Copacz Millburn Sr. High School 462 Millburn Avenue Millburn, N. J. 07041	December 21, 1978
Paramus (16)	Richard Piazza Paramus Community School Spring Valley Road Paramus, N. J. 07652	January 11, 1979
Woodbridge (95)	Joseph Hoffman 71 Main Street Woodbridge, N. J. 07095	November 8, 1978
Jackson Twp. (15)	Frank Morra Clayton Middle School Coventry Rd. Jackson, N. J. 08527	January 23, 1979
Bergenfield (4)	Donald Angelica High School 80 S. Prospect Street Bergenfield, N. J. 07621	January 8, 1979
Trenton (85)	Lester Blinn Board of Education Administration Bldg. 108 North Clinton Avenue Trenton, N. J. 08609	November 9, 1978
Atlantic City (1)	Joseph Laco Atlantic City H.S. Albany & Atlantic Aves. Atlantic City, N. J. 08401	January 10, 1979
Franklin Twp. (128)	William Grippo Franklin Twp. Schools Somerset, N. J. 08873	December 1, 1978
MAECOM (100)	Thomas R. Niles 1 Main Street Box 502 Eastontown, N. J. 07724	November 30, 1978
Bound Brook (127)	Nat Carrea Bound Brook Adult School West Union Avenue Bound Brook, N. J. 08805	October 2, 1978

Appendix V

B/I INTERVIEW SAMPLE

Company/Firm	Individual Interviewed	Date
Raycomm Industries Incorporated P. O. Box 971 Freehold, NJ 07728	Mr. Richard Schweitzer Vice President of Industrial Relations Corporate Secretary/Treasurer	February 20, 1979
Perkin-Elmer Corporation 106 Apple Street Tinton Falls, NJ 07721	Mr. Peter Argyris Director of Management Development	February 22, 1979
International Flavors and Fragrances, Inc. 800 Rose Lane Union Beach, NJ 07735	Mr. Karl Gordinier Director of Employee Relations	February 22, 1979
Merck and Company, Inc. P. O. Box 2000 Rahway, NJ 07065	Mr. Eugene Bloomwell Manager of Development and Training	February 23, 1979
Phillips-Van Heusen Corp. 281 Centennial Avenue Piscataway, NJ 08854	Mr. Marty Starr Personnel Manager	March 1, 1979
Campbell Soup Company Campbell Place Camden, NJ 08100	Mr. Fred W. Wahl, Jr. Corporate Manager of Safety and Training	March 2, 1979
Foodarama Supermarkets 303 West Main Street Freehold, NJ 07728	Mr. Andrew A. Vecchione Director of Training	March 5, 1979
Nabisco, Inc. East Hanover, NJ 07936	Mr. Donald Ely Director of Human Resource Development	March 12, 1979
Bendix Corporation Route 35 Eatontown, NJ	Ms. Helen Sullivan Director of Training and Development	March 14, 1979
Resorts International Hotel-Casino North Carolina Ave. and Boardwalk Atlantic City, NJ 08404	Mr. Walter Qualls Director, Employee Development	March 15, 1979

Appendix VI

SAMPLING PROCEDURE AND SAMPLE METHOD FOR INITIAL PSAE INTERVIEWS

The universe from which the interview sample of public schools of adult education is drawn is the 1978-1979 listing of New Jersey Adult Education Programs supplied in Community Adult Education in New Jersey, published by the Bureau of Adult, Continuing, and Community Education, Division of Field Services, New Jersey Department of Education. Fifty-eight(58) entries, representing adult programs in community colleges, state colleges, vocational schools, adult learning centers, correctional and health institutions were disgarded. Due to lack of adequate program and/or enrollment data, an additional sixty-five(65) public school adult programs were deleted. The remaining sample consists of 145 N.J. adult education programs.

SIZE AND DIVERSITY FACTORS

Size of the 145 PSAE programs was determined by total program enrollments for the fiscal year ending June 30, 1977 (Community Adult Education Program Enrollment: Local School District and County Institutional Data by Fifteen Curriculum Areas, Bureau of Adult, Continuing and Community Education, 1977). The range of total enrollments was 18—21,766, with an average enrollment 2,500. The categorical range of total enrollments was as follows:

ENROLLMENT	NUMBER OF PSAE PROGRAMS
0- 500	25
501- 1,000	21
1,001- 2,000	37
2,001- 3,000	19
3,001- 4,000	15
4,001- 5,000	4
5,001- 6,000	8
6,001- 7,000	5
7,001- 8,000	5
8,001- 9,000	2
9,001-10,000	1
10,001-15,000	1
> 15,001	2
	TOTAL N =145

Based upon the mean program enrollment and the categorical range, three(3) program size categories were derived:

CATEGORY	SIZE RANGE
1 (small)	0-1000
2 (medium)	1001-3000
3 (large)	> 3001

The number of PSAE programs in each of the size sampling categories is thus:

CATEGORY	SIZE RANGE	# OF PROGRAMS
1 (small)	0-1000	47
2 (medium)	1001-3000	56
3 (large	> 3001	42
	TOTAL N =	145

Diversification was operationalized by the number of program areas offered or taught (see Beder, H.W.,: An environmental interaction model for agency development in adult education. Adult Education, Vol. 27, No. 3, 1978.) PSAE agencies are categorized by the Bureau of Adult, Continuing and Community Education (Community Education in New Jersey, 1978) as offering one or more of the following nine program areas:

1. General adult classes
2. ABE for English speaking adults
3. Citizenship (evening school for foreign born)
4. ABE for non-English speaking adults (ESL)
5. GED preparation
6. Spanish high-school equivalency (GED-S)
7. Adult Vocational-technical education
8. CLEP programs
9. Special programs.

For the convenience of initial interview sub-sampling, diversity, like size, was divided into three categories:

DIVERSITY TERM	MEANING
unifocal	offering one (1) program area only
limited domain	offering 2 to 3 program areas, not inclusive of basic education (ABE, ESL, GED), vocational-technical education, and general adult classes
diverse	offering 3 or more program areas, inclusive of basic education, vocatioal-technical education, and general adult classes.

The number of PSAE programs in each of the diversity sampling categories is thus:

CATEGORY	# OF PROGRAMS
unifocal	21
limited domain	49
diverse	75
TOTAL N =	145

INTERVIEW SAMPLING

The semi-focused interview of PSAE directors is designed to provide the information prerequisite to the development of the objective mail questionnaire of the total PSAE sample. Because size and diversity factors may be crucial in determining the likely success of developing or maintaining cooperative relationships with business and industry, it is appropriate to interview a sub-sample of PSAE directors whose programs represent the range of size and diversity. With three categories of size and three categories of diversity, the following matrix of PSAE programs is generated:

		SIZE CATEGORY		
		Small ≤ 1000	Medium 1001-3000	Large > 3001
DIVERSITY CATEGORY	unifocal	I small, unifocal	II medium, unifocal	III large, unifocal
	limited domain	IV small, limited domain	V medium, limited domain	VI large, limited domain
	diverse	VII small, diverse	VIII medium, diverse	IX large, diverse

The nine cells of the matrix represent the range of size and diversity of PSAE programs. The number and (percentages) of PSAE programs in each cell is represented below:

		SIZE CATEGORY			
		Small ≤ 1000	Medium 1001-3000	Large > 3001	
DIVERSITY CATEGORY	unifocal	I 12(8.3%)	II 5(3.4%)	III 4(2.8%)	21(14.5%)
	limited domain	IV 23(15.9%)	V 19(13.1%)	VI 7(4.8%)	49(33.8%)
	diverse	VII 12(8.2%)	VIII 32(22.1%)	IX 31(21.4%)	75(51.7%)
		47(32.4%)	56(38.6%)	42(30%)	

The interview sub-sample will consist of one(1) randomly selected PSAE program from each of the nine matrix cells (N=9). Such a categorical random sub-sample will provide the interviewer with the potential range of variance (attributable to size and diversity) in PSAE orientations towards cooperation with business and industry; such data is the necessary prerequisite for the development of a valid questionnaire.

PSAE PROGRAMS BY
SIZE AND DIVERSITY

CELL I — SMALL SIZE, UNIFOCAL (12 programs)

9	Garfield Public Schools
38	Woodland Jr. School
44	Haddon Heights
57	Millburn Sr. High School
58	Montclair
74	P.A.C.O.
89	Highland Park
90	Jamesburg
97	Freehold Twp. High School
98	Keyport
102	Union Beach
121	Passaic Co. Manchester Reg.

CELL II — MEDIUM SIZE, UNIFOCAL (5 programs)

2	Mainland Regional H.S.
16	Paramus Community School
32	Moorestown A.S.
43	Haddonfield Memorial H.S.
139	Scotch Plains-Fanwood

CELL III — LARGE SIZE, UNIFOCAL (4 programs)

15	Northern Valley Regional H.S.
28	Cinnaminson
79	No. Hunterdon Reg.
95	Woodbridge

CELL IV — SMALL, LIMITED DOMAIN (23 Programs)

3	Pleasantville
7	Fairview Public School
12	T. Jefferson Middle School
26	Westwood High School
31	Maple Shade Adult Evening School
33	Northern Burlington County Regional School
39	Eisenhower School
60	New Ark School
65	Franklin Township P.S.
71	Lincoln School
77	Weehawken H.S.
83	Hopewell Valley Community School
86	Carteret High School
92	Metuchen High School
103	Wall High School
106	Jefferson Township H.S.
110	Morris Plains
115	Clayton Middle School

CELL IV (continued)

131	High Point Reg. High School
132	Hopatcong High School
134	Vernon Twp.
143	Hackettstown
144	Phillipsburg High School

CELL V — MEDIUM SIZE, LIMITED DOMAIN (19 programs)

4	Bergenfield High School
14	New Milford Adult School
17	Pascack Valley Reg. High School
19	Ridgefield Memorial High School
22	River Dell High School
23	Saddle Brook Comm. School, Collidge School
38A	Berlin Community School
50	Millville
54	E. Orange Public Schools
55	Frank H. Morrell High School
72	Hoboken
75	Kearney High School
85	Trenton
96	Asbury Park Learning Center
99	Middletown Township
112	Pequannock Twp. Adult School
114	Brick Township High School
138	Roselle
142	Westfield Sr. High School

CELL VI — LARGE SIZE, LIMITED DOMAIN (7 programs)

8	Fort Lee High School
10	Glen Rock Community School
11	Hackensack Public School
59	Newark
91	Old Bridge Community School
116	Lakewood
130	Watchung Hills Regional

CELL VII — SMALL SIZE, DIVERSE (12 programs)

1	Atlantic City High School
27	Wilbur Watts Middle School
29	Florence Twp. Memorial High School
42	Gloucester City
52	Belleville High School
64	Deptford Township High School
67	Maple Grove School
68	Paulsboro Public Schools
93	New Brunswick R. High School
104	Dover High School
126	Salem High School
133	Newton

CELL VIII — MEDIUM SIZE, DIVERSE (32 programs)

5	Liberty Community/Adult School
18	Ramsey Adult School
20	Ridgefield Park High School
24	Teaneck High School
30	Lenape Regional High School
34	Campus 1 High School
35	Rancocas Valley Regional High School
37	Highland Regional High School
40	Camden
45	Overbrook Regional Sr. High School District #1
47	Sterling High School
49	Bridgeton
56	Livingston High School
61	Spring Garden School
62	Orange Community School, Orange High School
66	Glassboro
70	Bayonne
76	Union City
78	Adult Learning Center
84	Princeton
101	Neptune
105	Hanover Park Regional
108	Morristown High School
117	South Regional High School
120	Passaic
124	West Milford High School
125	Pennsville Memorial High School
128	Franklin Twp. Schools
128A	North Plainfield
129	Somerville
136	Plainfield High School
137	Rahway

CELL IX — LARGE SIZE, DIVERSE (31 programs)

6	Fair Lawn Community School
13	Midland Park-Walwick
21	Ridgewood High School
25	Tenafly Public Schools
36	Willingboro
41	Cherry Hill High School East
46	Pennsauken
48	Upper Elementary School
51	Vineland
53	Caldwell-West Caldwell
63	Columbia High School
69	Washington Twp.
73	Jersey City
80	East Windsor Regional
81	Ewing Adult School
82	Hamilton Twp. Adult School
87	East Brunswick High School
88	Edison High School

CELL IX (continued)

94	South Plainfield
100	Monmouth Adult Education
107	Montville Township High School
109	Morris Hills Regional
111	Parsippany-Troy Hills
113	West Morris Regional
118	Toms River Community Adult School
119	Clifton - School Two
122	Martin Luther King School
127	Bound Brook
135	Elizabeth
140	Union High School
141	Union County Regional

RUTGERS
THE STATE UNIVERSITY
OF NEW JERSEY

Appendix VII

GRADUATE SCHOOL OF EDUCATION • CENTER FOR ADULT DEVELOPMENT
10 SEMINARY PLACE • NEW BRUNSWICK • NEW JERSEY 08903 • (201) 932-7416/7448

Dear Colleague:

As you probably know, cooperation between business and industry and adult education programs has been very much an issue of late. The Bureau of Adult, Continuing and Community Education has strongly encouraged such cooperation, and cooperation with business and industry has been a recent priority of the 309 (310) grants program. But, although the potential benefits of cooperation with business and industry are great, many adult education programs have had limited success in working with the private sector.

The Center for Adult Development of Rutgers is currently involved in a title 309 project designed to look at the whole issue of cooperation between public school adult education and business and industry. We are seeking to answer such questions as: To what extent is such cooperation feasible; what strategies are most effective in building cooperation and what are the assets and liabilities of cooperation? Our ultimate interest is to provide information which will assist you in dealing with the cooperation issue.

As you may have gathered from the contents of this package, we are asking your help. Specifically, would you be willing to donate some of your scarce time to completing the enclosed survey? Your response will be kept completely confidential and your assistance would be most appreciated. Merely place the completed survey in the enclosed self-addressed envelope and drop it in the mail.

Our thanks in advance. The results of the study will be made available to you free of charge by October, 1979. Preliminary results suggest some very provocative findings, and we are confident that you will be quite interested in the final product.

Sincerely,

Harold Beder

Gordon Darkenwald
Co-Directors
Center for Adult Development

HB/GD/mt
Enc.

Appendix VIII

RUTGERS
THE STATE UNIVERSITY
OF NEW JERSEY

FACILITATING COOPERATION
WITH
BUSINESS AND INDUSTRY

PUBLIC SCHOOL ADULT EDUCATION
SURVEY

CENTER FOR ADULT DEVELOPMENT
RUTGERS-THE STATE UNIVERSITY
NEW BRUNSWICK, N J 08903

Center for Adult Development
Rutgers - The State University
New Brunswick, N. J. 08903

FACILITATING COOPERATION WITH BUSINESS AND INDUSTRY

PUBLIC SCHOOL ADULT EDUCATION SURVEY

Directions for Completing Questionnaire

Please try to answer all the questions to which you are directed. Where numerical scales are used, circle the most appropriate response. We have tried to phrase questions so that they are generally applicable; however, if a forced-choice category does not fit your situation, please write in an explanation in the space provided. Unless otherwise specified, requests for program information or opinions should be based upon your experience during the last twelve (12) months in the program in which you are currently employed. Please read the definitions below and keep them in mind when completing the questionnaire. For the purposes of this survey the terms 'business and industry' and 'private sector' are considered synonymous. Many thanks for your assistance.

Definitions

Business and Industry. Private, profit-making companies or corporations involved in manufacturing, wholesale/retail trade, transportation, communications, utilities, service provision, finance or construction. Includes proprietary educational/recreational organizations; does not include government offices, public utility/transportation agencies, non-profit associations (e.g., Heart Association) or agencies (e.g., hospitals).

Cooperative Relationship (Educational). A jointly agreed upon relationship between two or more agencies in which an education activity is planned or implemented for a specified clientele.

Vocational/Technical Training. Educational activity designed to provide participants with entry-level occupational skills or to increase the proficiency of those already employed.

General Enrichment Activities. General adult classes providing liberal arts, recreational or avocational activity; does not include basic skills education for the disadvantaged or vocational/technical training.

______ RECD 1,2,3 RECD 4(1) CARD

1. For how many years have you directed adult education in your school district? ______ number of years 5,6

2. As director of adult education, how many hours per week do you devote strictly to adult education? ______ hours per week 7,8

3. On the average, how many hours per week do you spend meeting with or contacting members of the community to promote or expand your agency service? ______ hours per week 9,10

4. Have you ever been employed in a managerial or supervisor capacity in business and industry for two or more consecutive years? 11

   (1) ☐ No

   (2) ☐ Yes

5. In which of the following categories of organizations, associations or societies do you actively participate? (Check as many as pertinent):

   a. Community or civic organizations (such as Kiwanis, Lions Club, Rotary, etc.) ______ 12
   b. Business/industrial societies/associations (such as National Alliance of Business, Industrial Development Council, American Society of Training and Development, Chamber of Commerce, etc.) ______ 13
   c. Educational associations/councils/advisory boards (such as County Career Coordinating Council, AAENJ, ACE, CETA Advisory Council) ______ 14

6. For the current school year, what has been the total enrollment of your program? ______ total enrollment 15-20

7. What is your total operating budget for the current school year? ______ dollars 21-28

8. Approximately what percentage(%) of your students:

   a. are enrolled in general enrichment courses? ______% 29-31
   b. are enrolled in ABE/ESL/HSC? ______% 32-34
   c. are enrolled vocational/technical courses? ______% 35-37

9. Approximately what percentage(%) of your students:

   a. reside in rural areas? ______% 38-40
   b. reside in suburban areas? ______% 41-43
   c. reside in urban areas? ______% 44-46

10. Do you sponsor a non-traditional high school program which offers credit for life/work experiences? (Check one) 47

(1) ☐ No **Go to item #11**

(2) ☐ Yes **Proceed with this item**

a. Approximately how many students are enrolled in the non-traditional high school? ________ enrollment 48-51

b. Has the program been publicized with any employing organizations in your area?

(1) ☐ Yes (2) ☐ No 52

11. We are interested in the relative priorities your program places upon its education activities. Please rank-order the following activities according to their importance as program functions. Assign the number 1 to the activity deemed most important, 2 to the activity of next highest priority and so on for all five of the activities listed. For any activity not carried out by your program, please enter "not applicable" or "NA".

Program	Rank Order of Priority	
a. Provide avocational/recreational opportunities to adults	________	53
b. Provide disadvantaged learners with basic skills (ABE, HSC, etc.)	________	54
c. Provide adults with job entry vocational skills	________	55
d. Provide opportunities for career growth of employed adults	________	56
e. Other (specify): ________________		57

12. We are interested in the community context of your program. Please respond to the following items according to your best knowledge and judgment:

a. Approximately what percentage(%) of the adult population of your district(s) have:

completed four years or more of college?	______	58-59
have some post-secondary education (less than 4 years)?	______	60-61
have only a high school diploma?	______	62-63
lack a high school diploma or equivalent?	______	64-65

b. How would you characterize the degree of industrialization of the district(s) served by your agency? (Check one only) 66

(1) Heavily industrialized ______
(2) Moderately industrialized ______
(3) Little or no industrialization ______

13. Over the past school year, have you formally cooperated with any element of the private sector (business, industry, proprietary schools or service concerns) in your educational programming? 67

(1) ☐ Yes — Proceed directly with items #14-22

(2) ☐ No — Complete item #14, then skip items #15-22 and go directly to item #23

14. Sometimes directors find it difficult to establish cooperative relationships with the private sector. How significant have the following factors been in limiting your program's involvement with business or industry?

	In-significant						Very significant	
a. There is little or no business/industry in my area.	1	2	3	4	5	6	7	68
b. There is little offered by my program which business or industry needs.	1	2	3	4	5	6	7	69
c. I do not have enough time to make arrangements.	1	2	3	4	5	6	7	70
d. I don't know how to contact business or industry.	1	2	3	4	5	6	7	71
e. I don't know what educational needs business/industry has.	1	2	3	4	5	6	7	72
f. School district regulations or policies make it difficult to work with business and industry.	1	2	3	4	5	6	7	73
g. Competition with other adult schools, community colleges limits opportunities for cooperation.	1	2	3	4	5	6	7	74
h. Experience with business and industry in the past leads me to believe that cooperation is not worth the effort.	1	2	3	4	5	6	7	75
i. I see no advantage in cooperating with business and industry.	1	2	3	4	5	6	7	76
j. Other (specify): ______	1	2	3	4	5	6	7	77

1,2,3 RECD
4(2) CARD

Respond to Items #15-22 only if you have cooperated with the private sector in educational programming during the last school year (answered "Yes" to item #13); otherwise skip to item #23.

15. We are interested in the kinds of private sector organizations with which you have worked. In general, how closely have you worked with the following? (select "0" if you have not worked with the indicated group):

Category	NA	Not Closely						Very Closely	
a. Large manufacturing (greater than 500 employees)	0	1	2	3	4	5	6	7	5
b. Medium manufacturing (100-500 employees)	0	1	2	3	4	5	6	7	6
c. Small manufacturing (less than 100 employees)	0	1	2	3	4	5	6	7	7
d. Retail stores	0	1	2	3	4	5	6	7	8
e. Service (food, hotel, recreational)	0	1	2	3	4	5	6	7	9
f. Financial institutions (e.g. banks, insurance companies)	0	1	2	3	4	5	6	7	10
g. Proprietary schools (Smoke-Enders, Lean Line, TM, etc.)	0	1	2	3	4	5	6	7	11
h. Other (specify): ______________________	0	1	2	3	4	5	6	7	12

16. At whose initiative were the **majority** of your cooperative educational programs initially started?

(Choose one only):

(1) ☐ Business/industry contacted me. Proceed with item #17 — 13

(2) ☐ An external third party (like CETA) got us together. (If so, please specify): ______________________ Proceed with item #17

(3) ☐ We contacted business/industry. Proceed with this item

In initiating cooperative relationships with business and industry, how effective have the following strategies been for you? (Respond "0" if you have not used that strategy):

Strategy Employed	Not Used	In-effective						Very Effective	
a. brochure mailing to business/industry	0	1	2	3	4	5	6	7	14
b. letters sent to business and industry	0	1	2	3	4	5	6	7	15
c. building on contacts through formal association/council meetings	0	1	2	3	4	5	6	7	16
d. building on contacts through informal community social activities	0	1	2	3	4	5	6	7	17
e. phone contact with business industry personnel	0	1	2	3	4	5	6	7	18
f. other (specify): ______________________	0	1	2	3	4	5	6	7	19

17. We are interested in the ways you have been able to work with the private sector (profit making business, industry or service concerns). One way adult programs sometimes work with business and industry is through referral. In this case, private sector organizations consciously and regularly refer students to your program for specific activities.

In the last 12 months, about how many students have been referred to your agency by business and industry in the following areas (place a "0" in the category if no students were referred in that area):

For basic skills (ABE, ESL)	______	20-22
For high school completion or equivalent (HSC, GED, Non-Traditional HS)	______	23-25
For vocational/technical training	______	26-28
For general enrichment activities related to their job (e.g. assertiveness training, etc.)	______	29-31
For job counseling/employability skills development	______	32-34
Other (specify): ______________________________	______	35-37

18. Another way that programs sometimes work with the private sector is through co-sponsorship. In a co-sponsorship relationship, your agency and the business/industrial or service concern jointly provide resources (e.g. teachers, facilities) and jointly sponsor classes.

In the following table, indicate both the number of such co-sponsored classes or activities and the approximate number of students enrolled for each of the categories listed (place an "0" where no corresponding activity or student enrollment can be identified):

	(A) Number of Classes/Activities	(B) Number of Students	(A)	(B)
For basic skills (ABE, ESL)	________	________	38-39	40-42
For high school completion or equivalent (HSC, GED, Non-Traditional HS)	________	________	43-44	45-47
For vocational/technical training	________	________	48-49	50-52
For general enrichment activities related to their job (e.g. assertiveness training, etc.)	________	________	53-54	55-57
For job counseling/employability skills development	________	________	58-59	60-62
Other (specify): ______________	________	________	63-64	65-67

19. In general, how would you rate the success of your cooperative relationships with business and industry during the last twelve months? 68

Not Successful					Very Successful
1	2	3	4	5	6

1, 2, 3 → Complete this item, then proceed to item #21

4, 5, 6 → Proceed directly to item #20

1,2,3 RECD
4 (3) CARD

→ To what extent have the following factors contributed to the relative lack of success of your cooperative efforts with business and industry?

	Little or No Extent						Great Extent	
a. Scheduling problems	1	2	3	4	5	6	7	5
b. Employer dissatisfaction with outcomes	1	2	3	4	5	6	7	6
c. Participant dissatisfaction with program	1	2	3	4	5	6	7	7
d. Financial burden on our program	1	2	3	4	5	6	7	8
e. Lack of commitment by business/industry	1	2	3	4	5	6	7	9
f. Insufficient enrollments or retention	1	2	3	4	5	6	7	10
g. Insufficient publicity/promotion	1	2	3	4	5	6	7	11
h. Unclear division of responsibilities	1	2	3	4	5	6	7	12
i. Poor communication	1	2	3	4	5	6	7	13
j. Program objectives poorly defined	1	2	3	4	5	6	7	14
k. Other (specify): ____________	1	2	3	4	5	6	7	15

20. Answer this item only if you rated your cooperative relationships with business and industry as relatively successful, i.e. "4", "5" or "6" on the rating scale for item #19.

You indicated that in item #19 that your cooperative relationships with business and industry are relatively successful. To what extent do you attribute that success to the following factors?

	Little or No Extent						Great Extent	
a. Flexibility of my agency in meeting business/ industry needs	1	2	3	4	5	6	7	16
b. Freedom given me by school system	1	2	3	4	5	6	7	17
c. Image/visibility of my agency	1	2	3	4	5	6	7	18
d. Good communication with business/industry	1	2	3	4	5	6	7	19
e. Clear division of program responsibilities	1	2	3	4	5	6	7	20
f. Well-defined program objectives	1	2	3	4	5	6	7	21
g. Effective promotion/ publicity	1	2	3	4	5	6	7	22
h. Strong business/industry support or interest	1	2	3	4	5	6	7	23
i. Participant satisfaction	1	2	3	4	5	6	7	24
j. Employer satisfaction with outcomes	1	2	3	4	5	6	7	25
k. Other (specify): ____________	1	2	3	4	5	6	7	26

21. There are many potential benefits to be derived from cooperating with business and industry. Based upon your experience during the past 12 months, to what extent were the following benefits realized by your agency as a result of cooperation with the private sector?

Benefits	Little or No Extent						Great Extent	
a. Increased enrollments	1	2	3	4	5	6	7	27
b. Increased funds	1	2	3	4	5	6	7	28
c. Access to needed facilities, equipment, or materials	1	2	3	4	5	6	7	29
d. Increased visibility for our program	1	2	3	4	5	6	7	30
e. Access to needed instructional expertise	1	2	3	4	5	6	7	31
f. Increased influence of our program in the community	1	2	3	4	5	6	7	32
g. Provision of support services (counseling, testing, transportation, etc.)	1	2	3	4	5	6	7	33
h. Increased autonomy for my program	1	2	3	4	5	6	7	34
i. Other (specify): ____________________	1	2	3	4	5	6	7	35

22. There are also many potential costs involved in cooperation with the private sector. Based upon your experience during the last 12 months, to what extent has cooperative involvement with business or industry resulted in the following costs?

Cost	Little or No Extent						Great Extent	
a. Loss of program flexibility	1	2	3	4	5	6	7	36
b. Excessive expenditure of time	1	2	3	4	5	6	7	37
c. Programming hassles	1	2	3	4	5	6	7	38
d. Excessive fiscal expenditure	1	2	3	4	5	6	7	39
e. Scheduling problems	1	2	3	4	5	6	7	40
f. Negative publicity	1	2	3	4	5	6	7	41
g. Other (specify): ____________________	1	2	3	4	5	6	7	42

The remaining item should be answered by all respondents, regardless of whether or not you have been involved with the private sector in cooperative educational programming.

23. There are many significant factors which serve as impediments or barriers to developing cooperative relationships with business and industry. To what extent do you perceive the following factors as barriers to developing effective cooperation with the private sector?

Barriers	Little or No Extent						Great Extent	
a. Constraints on my time	1	2	3	4	5	6	7	43
b. Competition from other programs	1	2	3	4	5	6	7	44
c. Poor communication with business and industry	1	2	3	4	5	6	7	45
d. Lack of business or industry interest	1	2	3	4	5	6	7	46
e. Scheduling problems	1	2	3	4	5	6	7	47
f. Lack of funds	1	2	3	4	5	6	7	48
g. Differences between goals of private sector and those of my program	1	2	3	4	5	6	7	49
h. Image of public school adult education held by business and industry	1	2	3	4	5	6	7	50
i. Programming hassles	1	2	3	4	5	6	7	51
j. Lack of support by school system	1	2	3	4	5	6	7	52
k. Insufficient program staff	1	2	3	4	5	6	7	53
l. Private sector interested in profit, not education	1	2	3	4	5	6	7	54
m. Need for caution in developing new programs	1	2	3	4	5	6	7	55
n. Other (specify): ____________________	1	2	3	4	5	6	7	56

24. Any comments you might wish to make on the issues dealt with in this survey would be greatly appreciated.

Name and Title

Address

If you would like your own copy of the results of this study, please provide your name and address above.

Thank you very much for your assistance.

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Appendix IX

GRADUATE SCHOOL OF EDUCATION • CENTER FOR ADULT DEVELOPMENT
10 SEMINARY PLACE • NEW BRUNSWICK • NEW JERSEY 08903 • (201) 932-7416/7448

Dear Personnel Manager:

As you are probably aware, educational coooperation between the public and private sectors has been very much an issue of late. Although there has been much furor and discussion regarding the potential benefits and costs of such cooperation, there has been very little substantive inquiry into the practical considerations inherent in joint educational programming between educational institutions and business and industry.

The Center for Adult Development at Rutgers University, under the auspices of the New Jersey Department of Education, is currently involved in a study of existing trends and prospects in cooperative human resource development between the public and private sectors. We are seeking answers to such questions as: To what extent is such cooperation feasible; what are the major potential areas for collaboration between the public and private sectors; what are the potential costs and benefits of such cooperation, and what strategies are most effective in building cooperative relationships? Our ultimate goal is to provide both the public and private sectors with information from which sound training and development decisions can be made.

We are asking for your expertise and assistance in responding to the enclosed survey. The questionnaire has been developed to assess both the current training and development activities of your company and the need and prospects for cooperative activities between your firm and the public educational sector. Because the majority of responses require a knowledge of the overall training and development activities of your company, we are requesting that you ensure that it be completed by that individual in your organization with the best general perspective on employee development. All responses will be kept completely confidential and no company or individual will be mentioned in the project report. The average time required to complete the questionnaire in a sample survey was 15 minutes.

Please ensure that the survey is completed and returned as soon as feasible in the stamped self-addressed envelope enclosed. Your assistance and cooperation in this project is greatly appreciated, and we will be pleased to send you a summary of the survey results if you so desire.

Sincerely,

Craig Scanlan

Craig Scanlan
Director
Human Resource Development Project

CS/sh
Enc.

Appendix X

RUTGERS
THE STATE UNIVERSITY
OF NEW JERSEY

HUMAN RESOURCE DEVELOPMENT
STUDY

CENTER FOR ADULT DEVELOPMENT
RUTGERS-THE STATE UNIVERSITY
NEW BRUNSWICK, N J 08903

Center for Adult Development
Rutgers - The State University
New Brunswick, N.J. 08903

HUMAN RESOURCE DEVELOPMENT STUDY

Directions for Completing Questionnaire

Please try to answer all questions to which you are directed. Where numerical scales are used, circle the most appropriate response. We have tried to phrase questions so that they are generally applicable; however, if a forced choice category does not fit the situation of your company, please write an explanation in the space provided. Unless otherwise specified, requests for information or opinions should be based upon your company's experience during the last two (2) years. Please read the definitions below and keep them in mind when completing the questionnaire. Many thanks for your assistance.

Definitions

Training and Development. Any educational activity or opportunity made available to employees by your company. Includes tuition aid, scholarships, release time, apprenticeships, on-the-job training, formal classes etc. May be offered in cooperation with outside organizations.

Cooperation (Educational). Jointly agreed upon training and development activities planned or implemented by two or more organizations for a specific employee category.

Public Educational Institution. Any university, college or secondary school system operating under state or local government auspices.

Public School Adult Education Program. Any educational program for adults which is organized by a local school district. The majority of activities are scheduled for evenings in public school facilities.

HUMAN RESOURCE DEVELOPMENT
TRAINING AND DEVELOPMENT STUDY
SURVEY QUESTIONNAIRE

RECD ____________ 1,2,3 REC

4(1) CARD

1. We are interested in the goals or objectives of the training, development or educational activities offered by your company. How important is each of the following training goals to your organization?

Goals	Of Little Or No Importance						Of Great Importance	
a. To orient new employees to organization.	1	2	3	4	5	6	7	5
b. To facilitate individual employees' growth and development.	1	2	3	4	5	6	7	6
c. To improve human relations skills of management personnel.	1	2	3	4	5	6	7	7
d. To enhance employee motivation.	1	2	3	4	5	6	7	8
e. To increase productivity.	1	2	3	4	5	6	7	9
f. To facilitate technological or procedural changes.	1	2	3	4	5	6	7	10
g. To facilitate compliance with safety standards, or other government regulations.	1	2	3	4	5	6	7	11
h. To fulfill affirmative action requirements.	1	2	3	4	5	6	7	12
i. Other (specify): ____________ ____________________	1	2	3	4	5	6	7	13

2. Over the past two years, has your company cooperated with any public educational institution (e.g. public school, college or university) in order to provide training, development, or education for your employees?

(1) [ ] Yes — Proceed directly to Item #3 — 14

(2) [ ] No — Proceed directly to Item #8

Proceed with Items #3-7 only if, over the last two years, you have formally cooperated with educational institutions to provide training and development opportunities for your employees (answered "yes" to Item #2). Otherwise skip Items #3-7 and proceed directly to Item #8.

3. We are interested in the types of educational institutions or organizations (both public and private) which you have cooperated over the past two years. In general, how closely have you cooperated with the following (select "0" if you have not worked with the indicated group):

Category	NA	Not Closely						Very Closely	
a. Private training/development consultant firms	0	1	2	3	4	5	6	7	15
b. Professional or trade associations (ASTD, ASPA, AMA, etc.)	0	1	2	3	4	5	6	7	16
c. Public Universities (e.g. Rutgers)	0	1	2	3	4	5	6	7	17
d. Private Universities or Colleges (Seton Hall, Fairleigh-Dickinson, NYU, etc.)	0	1	2	3	4	5	6	7	18
e. Public four-year colleges (Trenton State, Stockton, Jersey City, etc.)	0	1	2	3	4	5	6	7	19
f. Community (two-year public) colleges	0	1	2	3	4	5	6	7	20
g. Public school adult education programs	0	1	2	3	4	5	6	7	21
h. Other (specify): ________ ____________________	0	1	2	3	4	5	6	7	22

4. In general, in cooperating with public educational institutions (universities, colleges, public schools) which party had major responsibility for each of the activities listed below? (Check one only for each row):

Activity	(1) Our Company	(2) Ed. Institution	(3) Shared Responsibility	(4) Not Applicable to Our Program	
a. Developing/approving program content, objectives?	☐	☐	☐	☐	23
b. Providing classroom facilities?	☐	☐	☐	☐	24
c. Providing instructors?	☐	☐	☐	☐	25
d. Providing instructional materials?	☐	☐	☐	☐	26
e. Providing publicity or promotion?	☐	☐	☐	☐	27
f. Providing cost of release time, or monetary incentives for employees?	☐	☐	☐	☐	28
g. Recruiting participants?	☐	☐	☐	☐	29
h. Providing supervision of work-related training?	☐	☐	☐	☐	30
i. Evaluating program outcomes?	☐	☐	☐	☐	31
j. Other (specify): ______ ____________	☐	☐	☐	☐	32

5. Regarding cooperation with public educational institutions in general (schools, colleges, universities), how important are the following factors in implementing effective joint programs for employee training and development?

Factor	Of Little or No Importance						Very Important	
a. Flexible scheduling of activities by the educational institution(s)	1	2	3	4	5	6	7	33
b. A clear understanding of each party's responsibilities	1	2	3	4	5	6	7	34
c. Well-defined program objectives	1	2	3	4	5	6	7	35
d. Effective promotion/publicity	1	2	3	4	5	6	7	36
e. Well-established lines of communication	1	2	3	4	5	6	7	37
f. Demonstrably successful results of training activity	1	2	3	4	5	6	7	38
g. Cost-effectiveness of training activity	1	2	3	4	5	6	7	39
h. Other (specify): ____________ ______________________	1	2	3	4	5	6	7	40

6. There are many potential benefits to be derived from cooperating with public educational institutions in providing training and development opportunities for your employees. Based upon your experience during the past two years, to what extent were the following benefits realized by your organization as a result of cooperative programming with public educational institutions in general?

Benefits	Little or No Extent						Great Extent	
a. Decreased cost of training/development	1	2	3	4	5	6	7	41
b. Access to needed facilities, equipment or materials	1	2	3	4	5	6	7	42
c. Access to instructional expertise	1	2	3	4	5	6	7	43
d. Positive public relations for our organization	1	2	3	4	5	6	7	44
e. Increased employee job satisfaction (decreased grievance rate, turnover, absenteeism, etc.)	1	2	3	4	5	6	7	45
f. Increased productivity or effectiveness of employees	1	2	3	4	5	6	7	46
g. Other (specify): ____________ ______________________	1	2	3	4	5	6	7	47

7. There are also many potential costs involved in cooperation with public educational institutions. Based upon your experience during the last two years, to what extent has cooperative involvement with educational institutions resulted in the following costs?

Cost	Little or No Extent						Great Extent	
a. Excessive expenditures of time	1	2	3	4	5	6	7	48
b. Scheduling difficulties	1	2	3	4	5	6	7	49
c. Excessive costs (release time, etc.)	1	2	3	4	5	6	7	50
d. Unfavorable publicity	1	2	3	4	5	6	7	51
e. Labor (union)/management conflict	1	2	3	4	5	6	7	52
f. Disruption of our own organizational (unit) activities	1	2	3	4	5	6	7	53
g. Employee dissatisfaction with training/development activities (usefulness, access, etc.)	1	2	3	4	5	6	7	54
h. Other (specify): ____________ ____________________________	1	2	3	4	5	6	7	55

The remaining items should be answered by all respondents, regardless of whether or not your have been involved with educational institutions in cooperative training and development activities.

8. We are interested in potential areas of collaboration in training and development between your company and public educational institutions. For each of the activities or resources listed below, how great is the potential for collaboration between your company and a public educational institution?

Activity or Resource	Little or No Potential						Great Potential	
a. Training in management or organizational theory for administrative staff.	1	2	3	4	5	6	7	56
b. Training in human relations skills or leadership for supervisors/managers	1	2	3	4	5	6	7	57
c. Training in affirmative action/equal opportunity employment for personnel staff.	1	2	3	4	5	6	7	58

(This item is continued on the following page)

8. Continued:

Activity or Resource	Little or No Potential					Great Potential	
d. Training in job counseling for personnel staff.	1	2	3	4	5	6	7	59
e. Administrative/supervisory training in labor relations	1	2	3	4	5	6	7	60
f. Entry-level training or updating for technical or production employees	1	2	3	4	5	6	7	61
g. Entry-level training or updating for clerical/office employees	1	2	3	4	5	6	7	62
h. Training for staff/line employees in implementing government regulations (e.g. safety standards, etc.)	1	2	3	4	5	6	7	63
i. Basic skills education (English, math, reading) for educationally disadvantaged employees	1	2	3	4	5	6	7	64
j. High school completion programs for employees lacking a diploma	1	2	3	4	5	6	7	65
k. Training in customer relations skills	1	2	3	4	5	6	7	66
l. Use of facilities for classes/conferences	1	2	3	4	5	6	7	67
m. Vocational/psychological testing services	1	2	3	4	5	6	7	68
n. Sharing of training specialists, program developers, instructors or evaluators	1	2	3	4	5	6	7	69
o. Sharing of instructional materials	1	2	3	4	5	6	7	70
p. Other (specify): ________ ______________	1	2	3	4	5	6	7	71

1,2,3 RECD
4(2) CARD

9. We are particularly interested in your perceptions regarding the potential for cooperation with public school adult education programs. There are many significant factors which may serve as impediments or barriers to developing cooperative relationships with such adult schools. To what extent do you perceive the following factors as barriers to developing effective cooperation with adult education programs based in public schools?

Barriers	Little or No Extent						Great Extent	
a. Limited time available for cooperative program planning.	1	2	3	4	5	6	7	5
b. Inadequate communications with adult schools.	1	2	3	4	5	6	7	6
c. Poor performance of public school education in general.	1	2	3	4	5	6	7	7
d. Poor understanding by public school personnel of our company's training needs.	1	2	3	4	5	6	7	8
e. Poor quality of adult school offerings.	1	2	3	4	5	6	7	9
f. Lack of interest of public education in private sector training/development.	1	2	3	4	5	6	7	10
g. Potential scheduling problems.	1	2	3	4	5	6	7	11
h. Lack of funds for cooperative programming.	1	2	3	4	5	6	7	12
i. Differences between goals of public sector education and those of training in business/industry.	1	2	3	4	5	6	7	13
j. Lack of support by our company's officers.	1	2	3	4	5	6	7	14
k. Lack of relevance of much public education to real world of business.	1	2	3	4	5	6	7	15
l. Lack of flexibility of public school organizations.	1	2	3	4	5	6	7	16
m. It is more cost-effective to train employees ourselves.	1	2	3	4	5	6	7	17

(This item is continued on the following page.)

9. Continued:

Barriers	**Little or No Extent**						**Great Extent**	
n. Contractual arrangements with public educational institutions are too difficult or time consuming.	1	2	3	4	5	6	7	18
o. Cooperation with public educational institutions could potentially disrupt our own organizational activities.	1	2	3	4	5	6	7	19
p. Prior cooperative efforts with public educational institutions were unsuccessful.	1	2	3	4	5	6	7	20
q. Adult schools focus on leisure time activities.	1	2	3	4	5	6	7	21
r. Adult school instructors are generally not qualified to train our employees	1	2	3	4	5	6	7	22
s. Other (specify): ____________ ______________________	1	2	3	4	5	6	7	23

10. Any comments you might wish to make on the issues dealt with in this survey would be greatly appreciated:

DO NOT WRITE IN THIS SPACE

SIC ____________ 24

EC ____________ 25

TE ____________ 26